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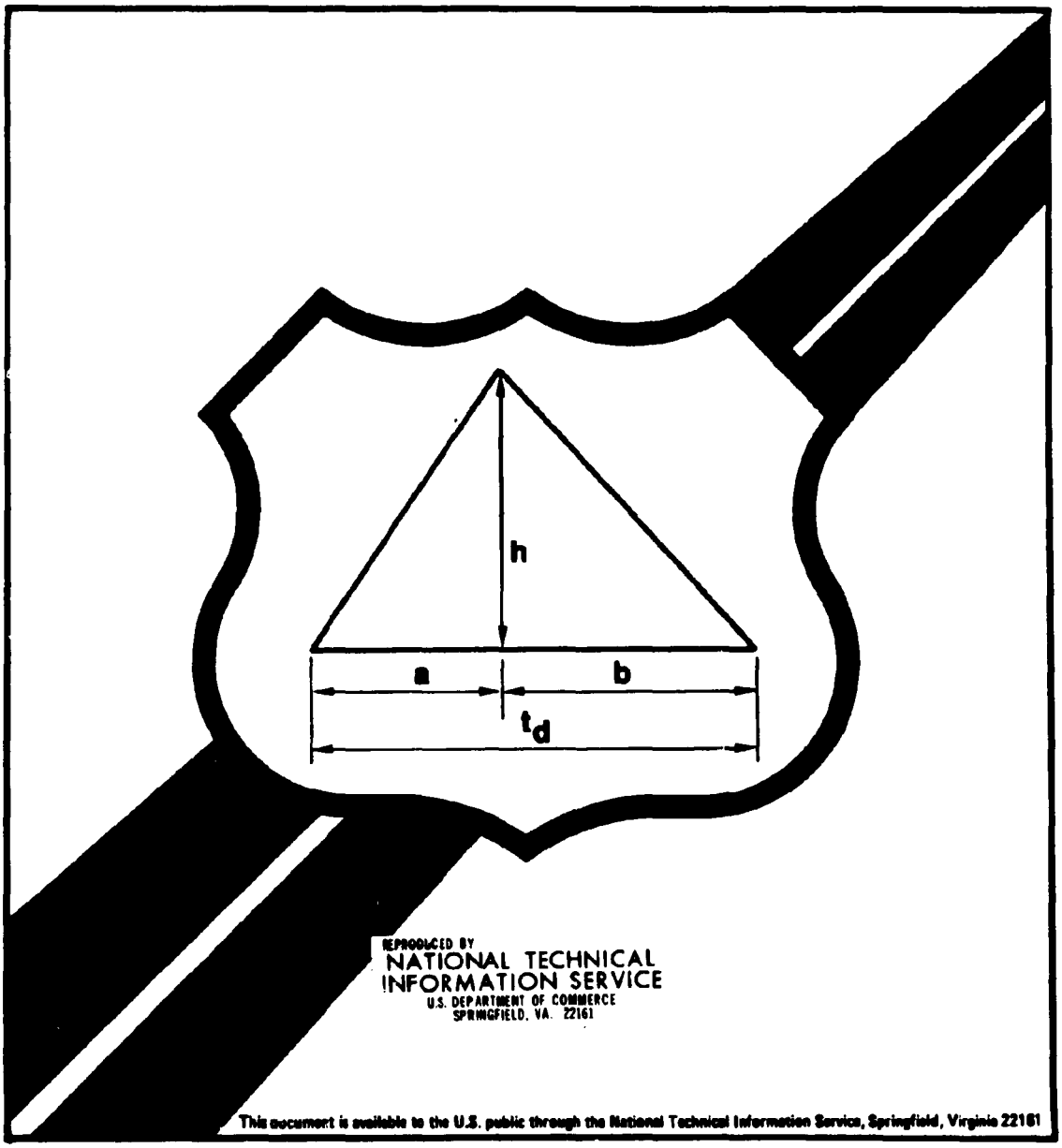

FOREWORD

This report describes in detail the development of a simple triangular hyetograph method for deriving local design storms to be used in the design of highway storm drainage structures. Detailed statistical analysis of rainfall data from 222 National Weather Service raingage stations and 13 Agricultural Research Service raingage stations all over the United States are presented.

Research in urban and rural highway storm drainage is included in the Federally Coordinated Program of Highway Research and Development as Tasks 2 and 3 of Project 5H "Protection of the Highway System from Hazards Attributed to Flooding."

This report is being distributed on request only due to the specialized nature of the contents.

Richard E. Hay, Director
Office of Engineering
and Highway Operations
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NOTICE

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16. Abstract

Recently developed improved methods for highway storm water drainage require information on the temporal distribution of rainfall (i.e., hyetograph) in addition to the average rain intensity. The triangular design hyetograph method is developed as a practical method to provide the local storm hyetograph for design of small highway drainage facilities. The method is based on the methods of moments, using and preserving the statistical mean of the first time moment of rainstorms. The method is proposed as a trade-off between theoretical sophistication and practical simplicity. A total of 293,946 rainstorms from the hourly precipitation data of 222 National Weather Service stations and 5 to 60 minute data of 13 raingage stations of USDA Agricultural Research Service were analyzed to provide the statistical values of the hyetograph parameters for the United States. In Volume II existing methods to describe the temporal distribution of the rainfall of a design storm are first briefly reviewed. Next, different definitions of rainstorms are discussed. The theory of the first-moment triangular design hyetograph method is presented. Details of the rainstorm data utilized are described. The results of the statistical analysis of the data are summarized and discussed. From these results a national map of the value of the nondimensional peak rain time of the triangular hyetograph is developed for use in highway storm drainage designs. The other volumes of this report set are:

Vol. I. Executive Summary (FHWA/RD-82/063)
Vol. III. User's Manual (FHWA/RD-82/065)
Vol. IV. Tabulation of Sample Detail Results of Statistical Analysis (FHWA/RD-82/066)

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During the operational period of this research project, a number of people directly or indirectly contributed to the successful completion of the project. We are most grateful to Dr. David M. Hershfield and Mr. James B. Burford of USDA ARS for their help and supply of the USDA Experimental Watersheds precipitation data. Mr. Shui-Tuang Cheng and Mrs. B. L. Monica Cheng were responsible in computer program modification and analysis of the data.

The project was under the joint direction of Drs. Ven Te Chow and Ben Chie Yen until the untimely death of Dr. Chow on July 31, 1981. All those who worked for the project felt deep sorrow for the irreplaceable loss of Dr. Chow.

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

LIST OF FIGURES

LIST OF TABLES

NOTATION

a = time from commencement of rainfall to peak intensity;

a° = a/t_d, nondimensional time of peak rainfall intensity;

b = time from peak intensity to end of rainfall;

b° = b/t_d, nondimensional time from peak intensity to end of rainfall;

D = rain depth of a storm;

D_{mean} = mean depth of rainstorms having the same duration at a location;

D_r = depth of 2-year 1-hour rainstorm;

$\bar{d}$ = average rain depth per time interval Δt, (Eq. 3.4)

d_j = rain depth of the j-th time interval;

G = second time moment arm of hyetograph, (Eqs. 3.7 or 3.8);

G_1° = G/t_d^2, nondimensional second time moment of hyetograph;

h = height of hyetograph, i.e., peak rain intensity;

h° = nondimensional peak intensity, = 2 for triangular hyetograph;

i = rainfall intensity;

j = index;

n = number of time intervals;

t = time;

$\bar{t}$ = first time moment arm of hyetograph, (Eqs. 3.5 or 3.6);

$\bar{t}^\circ$ = $\bar{t}/_d$, nondimensional first time moment arm of hyetograph

t_d = nominal duration of rainfall;

t_d' = true duration of rainfall;

α = adjustment factor for a°, (Eq. 5.2);

Δt = time interval; and

σ_t = standard deviation of hyetograph, (Eqs. 3.9 or 3.10).

Superscript (o) indicates nondimensional quantities normalized by t_d or D.

1. INTRODUCTION

Properly designed storm water drainage facilities are important components contributing to successful performance of a highway system. Recently developed improved methods for the design of storm drainage facilities for protection of highways from flood hazards and abatement of pollution from highway storm runoff require information not only on the average intensity and duration of the rainfall but also on its time distribution, i.e., the hyetograph. In a previous investigation [Yen and Chow, 1977] the feasibility of using the method of moments to describe the temporal pattern of local design storms was studied. Theoretical background and methodologies of the triangular and trapezoidal design hyetographs based on the method of moments were developed and analyzed by using 7,484 rainstorms at four locations in the United States. It was found that the first moment triangular hyetograph method was feasible and of practical simplicity. The two major purposes of this investigation are (1) to reconfirm the feasibility and practicality of the triangular hyetograph method by using a large number of rainstorms from at least one station in each of the states; and (2) to establish the national map of the nondimensional triangular hyetograph parameter and the standard procedure of the method to be used by highway drainage design engineers.

Highway storm drainage facilities are traditionally designed for a specific peak discharge corresponding to a given return period. For highway storm drainage systems, data on storm runoff is usually unavailable or inadequate. Therefore, the peak discharge for the specified return period is usually converted from rainfall data using a simulated rainfall-runoff-relationship. There are four basic drawbacks of such an approach: (a) Flooding of highways depends not only on the magnitude of the peak discharge but also on the volume and time distribution of the storm runoff; (b) The storm runoff pollution is contributed not only by the design rainstorm but also by other rainstorms of different frequencies; (c) The rainfall-runoff relationship is nonlinear and hence the frequency of a rainstorm need not be the same as the frequency of the runoff it produces; (d) The design return period is arbitrarily chosen, although sometimes based on past experience but without a specific scientific method.

In view of the above drawbacks of the conventional approach in determining the design rainstorms for drainage facilities and the recent advance in the fields of hydrology and hydraulics, a thorough study to develop a more satisfactory method for the determination of the design storm runoff is appropriate and desirable. Recent development in the hydraulic and hydrologic sciences has laid sufficient background to attack the four major drawbacks just mentioned. The design return period can be determined by a probability analysis of risks and uncertainties for the expected service period of the drainage facilities, preferably with cost-benefit trade-off consideration [Yen, 1970; Yen and Tang, 1976; Tseng et al., 1975]. On the second and third drawbacks concerning the rainfall-runoff relationship, a number of advanced storm runoff simulation models have been or are being developed which are capable to account for the nonlinear effect [e.g., see Chow and Yen, 1976; Colyer and Pethick, 1976]. However, these methods require hyetographs as their input.

As to the first drawback of determination of the volume and time distribution of storm runoff, a prerequisite is to know the time distribution of the rainfall, i.e., the hyetograph, for the local area considered. There are two different cases to be considered. One is the determination of an appropriate design rainstorm hyetograph to be used for the sizing of the dimensions of the drainage facilities. The other is a number of rainstorms of different quantitative and qualitative characteristics to check the flood releasing and pollution abatement aspects of the designed or existing facilities. Presumably and eventually, the flooding and pollution control aspects should be considered simultaneously in the design to facilitate the cost-effectiveness of the project. However, at present such a simultaneous consideration is not yet feasible because of the inadequate *a prior* information on the installation cost of drainage facilities and the nearly total lack of information on the damage costs due to flooding and pollution.

The temporal pattern of natural rainfall (i.e., the geometry of the hyetograph) at a location varies from storm to storm, and the patterns of future storms cannot be predicted exactly. Therefore, prediction of the hyetograph of future storms for drainage designs can only be achieved either

by subjective designation or by statistical analysis of past records. In a previous feasibility study, Yen and Chow [1977] demonstrated the simplicity and practibility of using the triangular hyetograph method for design of highway drainage facilities. The main objective of this investigation is to utilize an extensive amount of rainfall data which are of best quality presently available, from at least one station per state, to establish the values of triangular hyetograph parameters to be used by engineers for design of highway drainage facilities.

This report set of four volumes summarizes the results of the study. Volume 1 is an executive summary. Volume 2 summarizes the theory, presents the methodology and describes the data utilized and the results of analysis. Volume 3 presents the procedure of the triangular design hyetograph method with examples. It also contains the user's guides for the associated computer programs. Volume 4 presents a sample set of detailed results of the statistical analysis of the rainfall data in tabulated form.

II. PREVIOUS WORK ON TEMPORAL DISTRIBUTION OF RAIN IN A STORM

Previously proposed methods to describe the temporal distribution of the point rainfall of a storm can be grouped into the following four catagories: (a) method of assumed distribution, (b) method of mass (cumulative depth) curve, (c) method of relative ranking, (d) method of moments. Representative work of each catagory is discussed briefly in this chapter. Any one of these methods can be adapted to fit the time distribution of a particular rainstorm satisfactorily. However, their ability to provide design hyetographs based on the record of observed rainfall differ considerably.

A. Method of Assumed Distribution

In this method the temporal distribution of the rainfall of a storm (i.e., the pattern of the hyetograph) is described by an assumed distribution. Various distributions such as triangular, gamma, and beta distributions have been proposed. The most famous in this group is the dual-power function distribution proposed by Keifer and Chu [1957]. Their distribution is shown in Fig. 1. The design hyetograph is characterized by a parameter γ which is the ratio of the occurrence time of the instantaneous peak rain intensity to the duration of the rainfall considered. The constants in the distribution function are taken from the constants a, b, and c in the rainfall intensity formula $\bar{i} = a/(t_d^b + c)$ where $\bar{i}$ is the average rain intensity over the duration t_d. From the 5-minute interval data of 27 selected heavy rainstorms recorded at one to four gaging stations in Chicago between May 1935 and May 1955, they selected the maximum rainfall depths for specified durations (not true rainstorm durations) of 15, 30, 60, and 120 minutes. Based on a study on the distribution of the 5-minute rainfall within these specified durations, they proposed the dual-power function distribution and suggested $\gamma = 3/8$. Actually they adjusted the time distribution of the rainfall according to the Chicago sewer system in order to make the simulated runoff conform with the measured sewer flow. It is difficult to justify this adjustment because the rain coming from the sky would not be affected by the behavior of the sewer flow. Moreover, it should be noted that the dual power function

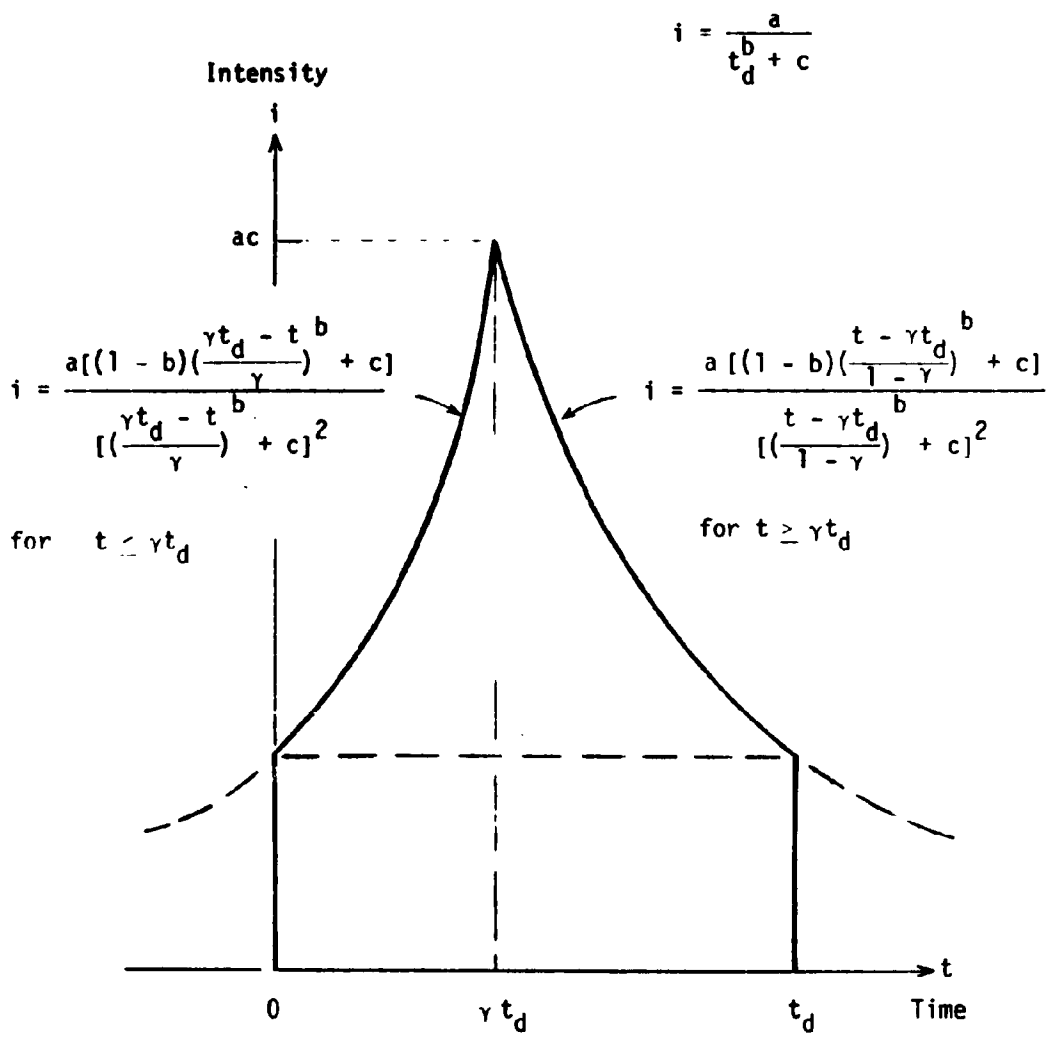

Fig. 1. Design storm pattern of Chicago hydrograph method proposed by Keifer and Chu [1957]

distribution was proposed based on the maximum rainfalls for given durations from different rainstorms, not from any single rainstorm. In other words, it is an envelope curve.

Description of Keifer and Chu's design hyetograph has been included in many published literatures, and hence it is well known. However, its use has not been popular because it is relatively difficult to establish and it involves certain degree of judgement. Chen [1976] has demonstrated the tedious procedure to establish the design hyetograph.

Moreover, Keifer and Chu did not actually find the true γ values for the 27 rainstorms they studied. They obtained the γ values for the specified durations they considered, not the true rainstorm durations. Considerable variation of the value of γ exists for natural rainstorms. It is rather difficult to obtain accurate estimates of γ from the 5-minute rainfall data or from the standard U.S. National Weather Service hourly precipitation data. Using Keifer and Chu's definition of rainfall duration, Bock [1960], Chen [1976] and Keifer [1960] found considerable random variation of γ from the suggested value of 3/8. Yen and Chow [1977] showed that using the actual durations of 138 rainstorms at four locations the statistical mean of γ for each location differs from 3/8 and is not constant for different durations.

The reader may refer to Hilgrim and Cordery [1975] for a brief review of other studies using assumed distributions.

B. Method of Mass Curve

Another popular method to describe the temporal distribution of rainfall is to use the mass curve, i.e., the curve of cumulative rain depth versus time. A typical rain depth mass curve is shown in Fig. 2. One advantage of this approach is that the mass curve is essentially the record of a clock-driven continuous recording raingage. The slope of the mass curve is the intensity of the rainfall. However, in practice it is often found tedious and sometimes inaccurate to obtain the hyetograph from the derivatives of the mass curve [Ruthroff and Bodtmann, 1976].

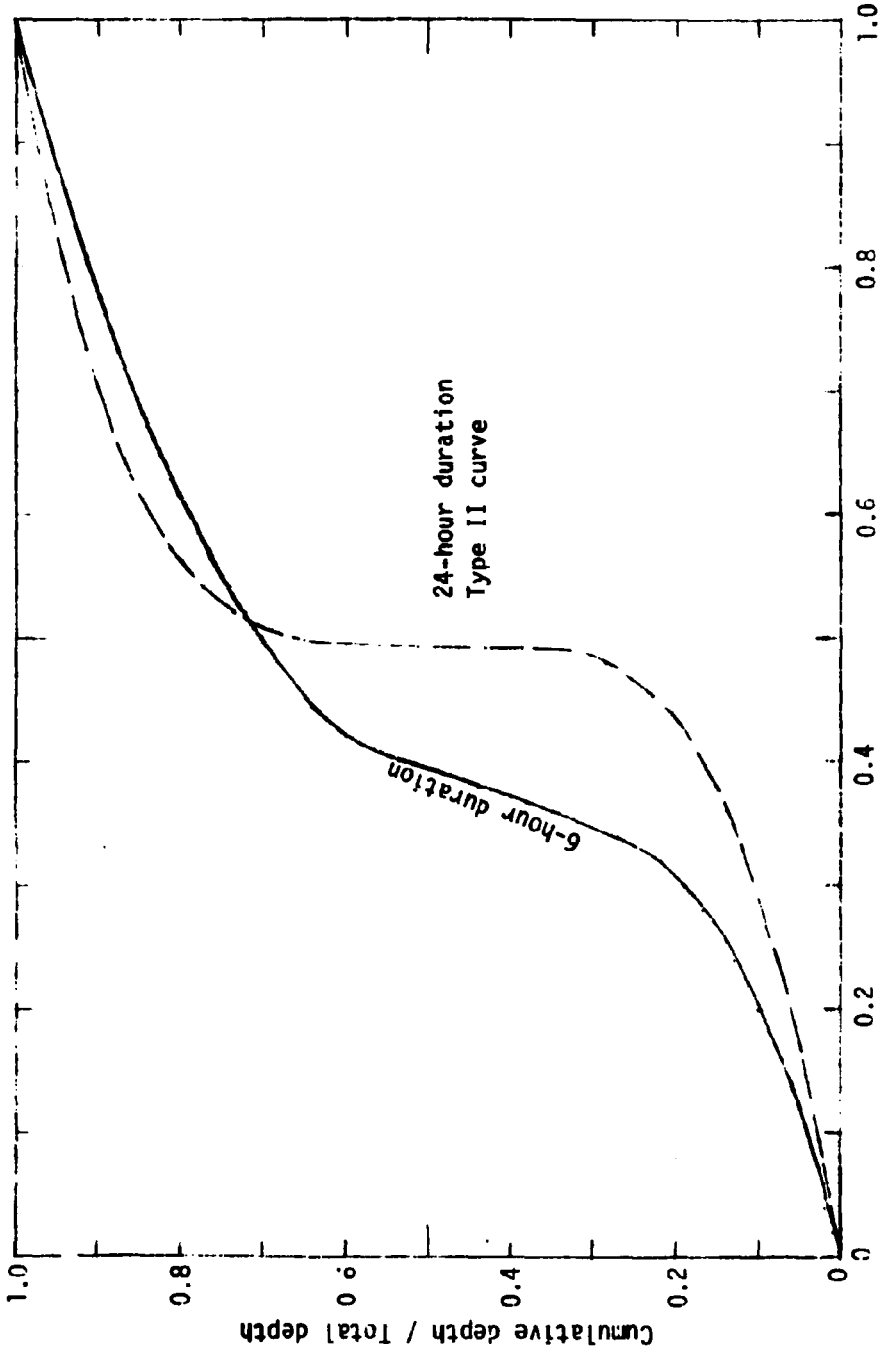

Fig. 2. Rain-depth mass curves proposed by SCS

Huff [1967] analyzed 261 heavy rainstorms in central Illinois having durations from 3 to 48 hours to obtain dimensionless mass curves of various exceedance probabilities. He used 30-minute time intervals and defined a storm as a rain period separated from the preceding and succeeding rainfalls by 6 hours or more. His dimensionless mass curve is not the average of the mass curves for the individual rainstorms. Instead, he first divided the duration of each rainstorm into four quarters. Next the percentage of the rain depth in each of the quarter time interval is determined for each of the rainstorms. He then classified the rainstorms on the basis of which quarter time interval that the maximum interval rain depth falls into. For example, those rainstorms having the highest percentage of rain depth in the first quarter time interval are called the first quartile storms. Those having the highest percentage of rain depth in the second quarter interval are called second quartile storms, etc. With the storms classified according to the interval of occurrence of the highest percentage of rain depth, the percentage of rain depth for each of the specified normalized (by duration) time interval (he used ten subdivisions of the duration) is computed for each rainstorm. The mean of the percentage of rain depth of each specified time interval is computed for each quartile class rainstorms. The means of the percentage depth for consecutive time intervals give the average temporal distribution of the specified quartile rainstorms. Actually Huff computed the interval percentage of rain depths in terms of exceedance probability instead of just the mean.

Another set of well-known mass curves describing the temporal distribution of rainfall is the U.S. Department of Agriculture Soil Conservation Service (SCS) 24-hour and 6-hour mass curves [SCS, 1972; Kent, 1973]. There are two 24-hour mass curves. Type I is for the coastal states west of the Sierra Nevada mountains and interior Alaska, and Type II which is shown in Fig. 2 is for the remaining United States. The SCS 6-hour mass curve is also reproduced in Fig. 2, with the time scale normalized by the rainfall duration for use for other durations. The precise procedure on how these SCS mass curves were developed was not documented.

British National Environmental Council, in their "Flood Studies Report, Vol. II: Meteorological Studies," also recommended the use of mass curve to describe the time distribution of rainfall in Great Britain. Their curves were derived in a manner similar to those of Huff's.

Other studies using the mass curve include those by Blumenstock [1939], Hicks [1944], U.S. Army Corps of Engineers [1948], and Hershfield [1962].

C. Method of Relative Ranking

Pilgrim and Cordery [1975] proposed a method ranking the depths in time intervals of rainstorms. Several of the largest recorded rainfalls of a given duration are first selected for a given location. Each rainstorm is subdivided into equal time intervals. The intervals are ranked according to the depth of rainfall in the interval. For each interval, the ranking of different rainstorms are added from which the average ranking is computed for this interval. The relative rankings of all the intervals of the duration indicate the temporal distribution. A percentage of total rainfall is assigned to each of the intervals according to the mean ranking of the interval.

The method requires very short time interval rain data if a short duration hyetograph is of interest. For instance, it is meaningless to use the hourly rainfall data to determine the temporal pattern of one-, two-, or even three-hour storms. Moreover, the simulated temporal pattern of rainfall depends on the numbers of interval divisions and of rainstorms used.

D. Method of Moments

The method of moments is based on the idea that a hyetograph, being a geometric figure, can be characterized by its moments with respect to the commencement of the rainfall. Since none of the rainstorms are alike, the statistical means of the moments of many rainstorms indicate the average characteristics of an expected rainstorm. Distributions having their geometric parameters characterized by the moments will then be able to approximate the pattern of the expected hyetograph by preserving the moments. Yen and Chow [1977] investigated the use of triangular and trapezoidal distributions

characterized by the rainfall statistical moments. The triangular distribution requires the use of only the first moment whereas the trapezoidal distribution requires the first and second moments. They found that the accuracy of the generally available rainfall data is insufficient to give reliable and meaningful values of the third moment. Therefore, distributions requiring more than the first two moments are at present unsuitable for practical uses. More details on the triangular hyetographs using the method of moments are given in the following chapter.

III. THEORY OF TRIANGULAR HYETOGRAPH METHOD

The triangular design hyetograph method is based on the assumed triangular distribution of rainfall preserving the most important (first order) characteristic of the rainstorms -- the first time moment. The time distributions of different rainfalls at a location are different. It has never been observed of two identical natural rainstorms, and it probably will never occur. Therefore, the future rainstorm hyetograph that is critical to the design of a highway drainage facility can only be conjectural. One scientific approach to guess the critical design storm is to utilize probability theory, i.e., the expected hyetograph based on statistical analysis of past records. In the triangular hyetograph method, the parameter that is subject to statistical analysis using the past rainfall data is the first moment with respect to the beginning of the rainfall.

The development of the triangular design hyetograph has been reported elsewhere [Yen and Chow, 1977, 1980]. Therefore, only the theory that is relevant to the present study is briefly described here.

A. Definition of Rainstorm

A prerequisite to the analysis of temporal distribution of rainstorms is the definition of a storm. A number of definitions has been proposed by different investigators, including the following.

(1) A rainstorm is defined as a continuous and intermittent rain having intermittent elapse time less than a specified value. In other words, a rainstorm is separate from another rainstorm by an elapse time greater than the specified between-storm time interval. For example, Huff [1967] used an elapse time of six hours to separate storms.

(2) A rainstorm is defined by a minimum elapse time that separates rainstorms such that there is no significant statistical correlation between successive rainstorms. This elapse time can be established, e.g., through auto-correlation analysis of the rainfall data.

(3) A "storm" is considered as one that has a depth of rainfall exceeding a threshold value within a specified length of time. In other words, it could be actually only the heavy part of a continuous rainfall while the light rain before and after the specified length of time is ignored. Examples of this approach include the selection of the National Weather Service "excessive precipitation" and the "Chicago method storm" by Keifer and Chu [1957].

(4) A rainstorm is defined as the rain coming from the same rain cell which contains a number of subcells (rain clouds) that are moving as a unit. At a point on the ground the rainfall from the same rain cell is considered as one rainstorm, although there are intermittent no-rain intervals between the subcells. This definition is perhaps the most desirable one from the physical viewpoint, but it is difficult for adoption in applications unless the information on the rain cell is available.

(5) A rainstorm is considered as a continuous rainfall. Whenever there is a period of no rain, it is regarded as separating two rainstorms. The rainstorms defined by this definition depends on the time interval Δt used in recording the rainfall data. Any actual elapse time less than Δt will not be detected and the two discontinued rainfall would be considered as one storm. Any elapse time longer than $2\Delta t$ will separate the discontinuous rainfall into two separate storms. Any elapse time between Δt and $2\Delta t$ in length may or may not separate the rainfall into two storms, depending on the times of cessation and commencement of the intermittent rainfall relative to the position of the time interval Δt.

Theoretically and physically, the fourth definition of rainstorm is the most desirable one whereas the third and fifth are the least desirable. However, the shortest time interval of the NWS precipitation data is in clock hour, which is sufficiently long to separate rainstorms according to the fifth definition not significantly different from those using the fourth definition. Thus, the fifth definition becomes attractive because of its relative easiness in digital computer manipulation. Unfortunately, the same cannot be said if Δt is five minutes.

In view of the above discussion and the fact that most of the data used in this study are the NWS hourly precipitation data, the fifth definition is adopted in this study because of its practicality.

B. Calculation of Rainstorm Parameters

Once a rainstorm is defined, its duration and depth of rainfall can be determined. As illustrated in Fig. 3, the true rainfall is represented by the dashed curve. However, often rainfall data are measured at equal finite intervals, Δt, and the variation of rain within each Δt is unknown, as shown by the block diagram of the solid lines. The nominal duration of the block diagram is t_d which is equal to or longer than the actual duration, t_d'.

The depth of rain of a storm, D, in inches or mm, is

$$D = \int_0^{t_d'} i \, dt \tag{3.1}$$

for the dashed curve of actual rain in Fig. 3, where i is the rainfall rate, or intensity, in in./hr or mm/hr; or

$$D = \sum_{j=1}^{n} d_j \tag{3.2}$$

for the block diagram data in Fig. 3, where d_j is the rain depth in the j-th time interval, and n is the number of time intervals of the storm. The average rainfall intensity for the j-th time interval, i_j is

$$i_j = d_j/\Delta t \tag{3.3}$$

The average depth of the rainstorm, $\bar{d}$ in inches or mm per time interval, Δt, for the entire storm is

$$\bar{d} = \frac{1}{n} \sum_{j=1}^{n} d_j = \frac{D}{n} \tag{3.4}$$

The first moment arm of the hyetograph with respect to the beginning time of the rainstorm, $\bar{t}$, is

$$\bar{t} = \frac{1}{D} \int_0^{t_d'} it \, dt \tag{3.5}$$

for the actual hyetograph, and

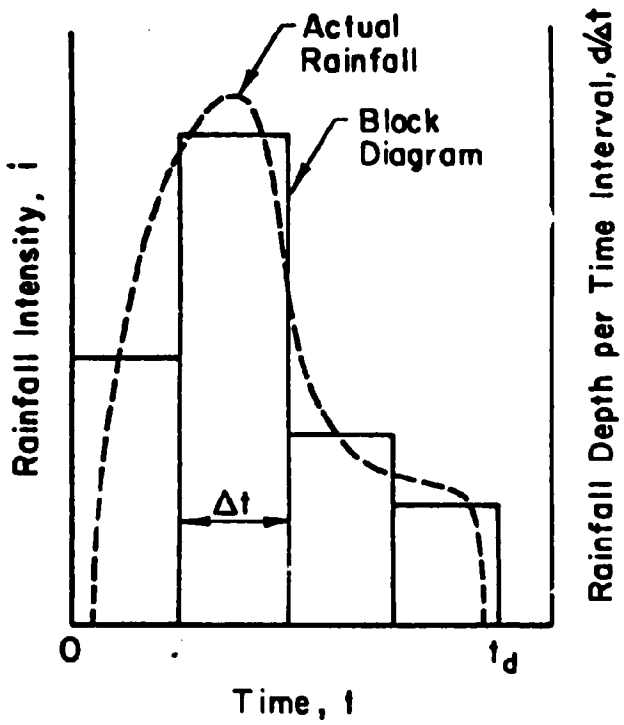

Fig. 3. Example hyetograph

$$\bar{t} = \frac{\Delta t}{D} \left[\sum_{j=1}^{n} (j - 0.5)\, d_j \right] \tag{3.6}$$

for the block-diagram nominal hyetograph.

The second moment arm of the hyetograph with respect to the commencement of the rainstorm, G, is

$$G = \frac{1}{D} \int_0^{t_d'} i\, t^2\, dt \tag{3.7}$$

or, for the block diagram,

$$G = \frac{(\Delta t)^2}{D} \left[\sum_{j=1}^{n} (j - 0.5)^2\, d_j + \frac{1}{12} D \right] \tag{3.8}$$

Another second moment measure, the standard deviation, σ_t, which is measured from the centroid $\bar{t}$, is

$$\sigma_t = \left[\frac{1}{D}\int_0^{t_d} i\,(t - \bar{t})^2\,dt\right]^{1/2} \tag{3.9}$$

or, for the block-diagram hyetograph,

$$\sigma_t = \left[\frac{(\Delta t)^2}{D}\sum_{j=1}^{n}(j - 0.5)^2\,d_j - \bar{t}^2\right]^{1/2} \tag{3.10}$$

C. Normalization of Rainstorm Parameters

Normalization of the rainstorm parameters by using physically significant rainstorm variables to nondimensionalize the parameters permits more general expression and easy comparison of the characteristics of the rainstorms. In this study, rainstorm depth D and duration t_d are chosen to normalize the parameters. For a time interval Δt, the nondimensional interval depth $d_j^o = d_j/D$, where the superscript o indicates the nondimensional quantity. Accordingly,

$$D^o = \sum_{j=1}^{n} d_j^o = 1 \tag{3.11}$$

$$t_d^o = 1 \tag{3.12}$$

$$\bar{i}^o = D^o/t_d^o = 1 \tag{3.13}$$

$$\overline{d^o} = \frac{1}{n}\sum_{j=1}^{n} d_j^o = \frac{1}{n} \tag{3.14}$$

$$\bar{t}^o = \bar{t}/t_d \tag{3.15}$$

$$G_1^o = G/t_d^2 \tag{3.16}$$

The values of the parameters expressed in Eqs. 3.1 through 3.16 can be computed from the rain data for each rainstorm. The statistical values of these parameters for all rainstorms of the same class can subsequently be determined.

D. Triangular Representation of Hyetograph

For a triangular representation of the hyetograph, only the first time moment is needed to define the nondimensional hyetograph. Referring to Fig. 4 and Eq. 3.4, and noting that $t_d/n = \Delta t$,

$$t_d = a + b \tag{3.17}$$

$$\bar{d} = h\,\Delta t/2 \tag{3.18}$$

$$\bar{t} = (t_d + a)/3 \tag{3.19}$$

in which a, b, and h are geometric parameters of the triangular hyetograph shown in Fig. 4. Solving these equations yields

$$a = 3\bar{t} - t_d \tag{3.20}$$

$$b = 2t_d - 3\bar{t} \tag{3.21}$$

$$h = 2\bar{d}/\Delta t = 2D/t_d = 2\bar{i} \tag{3.22}$$

For the nondimensional hyetograph (Fig. 5)

$$a^o = a/t_d = 3\bar{t}^o - 1 \tag{3.23}$$

$$b^o = b/t_d = 2 - 3\bar{t}^o = 1 - a^o \tag{3.24}$$

and

$$h^o = \frac{h}{D/t_d} = 2 \tag{3.25}$$

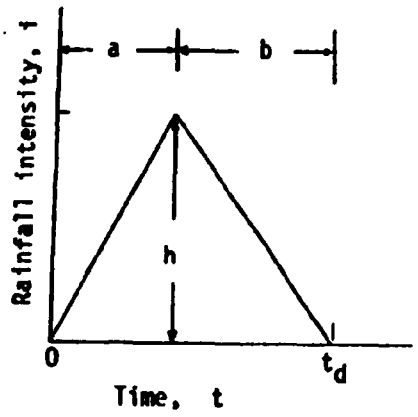

Fig. 4. Triangular representation of hyetograph

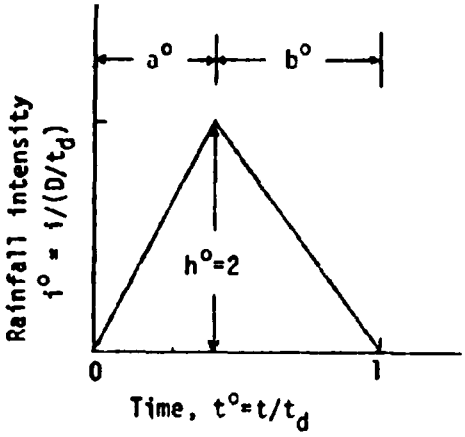

Fig. 5. Nondimensional triangular hyetograph

E. Statistical Analysis of Rainstorm Parameters

The rainstorm parameters described in the preceding two sections can be computed for each observed rainstorm on the rainfall record. However, past rainstorm patterns will not be repeated exactly. Future rainstorms can assume infinite number of time patterns and the probability of occurrence of any pattern is essentially zero. Therefore, the time pattern of a future rainstorm can only be predicted by using probability theory and based on statistical analysis of past records. The statistical mean condition of the past is adopted as the expected condition in the future, and there is a confidence interval to express the uncertainty of the prediction.

In the method of hyetograph representation by the method of moments, the dimensional and nondimensional rainstorm parameters are computed by using a computer program SATH (see Chapter 4 of Vol. III) for each rainstorm. The recorded rainstorms in the selected season at a given location are classified according to the duration and depth range of the storms. A statistical analysis is then performed on the rain data in a class to find the mean and variation for each of the parameters. Of particular interest is the nondimensional peaking time a^o since it is the only value required for the nondimensional triangular hyetograph.

F. Technique of Application of Nondimensional Triangular Hyetograph

Once the value of a^o of the nondimensional triangular hyetograph and the duration and depth of the design storm are known, the procedure of application of the triangular hyetograph method to determine the local design hyetograph is rather simple. Referring to Figs. 4 and 5,

$$a = a^o t_d \tag{3.26}$$

$$b = b^o t_d = t_d - a \tag{3.27}$$

$$h = h^o D/t_d = 2D/t_d \tag{3.28}$$

The depth of the design rainfall is a function of the rainstorm duration and return period. The design return period is either specified in the design code or obtained through a trade-off of costs and benefits of the project. The duration of the design storm presumably is equal to the critical length of time that would allow the water in the entire drainage basin to flow to the point of interest in order to produce a critical flood for the design. Once the design return period and duration are determined, the design storm depth can be obtained from U.S. National Weather Service (NWS) publications (Technical Paper No. 40, NOAA Atlas 2, or HYDRO-35) or through a frequency analysis of the depth-duration-return period relationship using available data as described in Chapter 3 of Vol. III. Since the aforementioned rainfall are point depth, an area reduction factor is recommended for areas larger than 8 square miles ($20\,km^2$). Area reduction factor maps are shown in Fig. 2 of Vol. III. These maps were developed based on information in a NWS report [Myers and Zehr, 1980] and data in Illinois. It should be noted that the area reduction factor curves presented in NWS Technical Paper 40 and appeared in many publications are roughly the upper-bound values close to the 2-year curves.

User's guide and procedure on application of the triangular design hyetograph is given in Vol. III.

IV. RAINFALL DATA UTILIZED

The rainfall data utilized in the development of the values of the hyetograph parameters included the hourly data for 222 U.S. National Weather Service (NWS) raingage stations and 5-minute data for 13 raingage stations in the agricultural experimental watershed network of the U.S. Department of Agriculture, Agricultural Research Service (ARS).

A. National Weather Service Hourly Data

The entire file of the NWS hourly precipitation data that is available on magnetic tapes from NOAA Environmental Data Service National Climatic Center was purchased and screened, from which 222 stations were selected for analysis. The name, station number, and period of record of these selected stations are listed in Table 1. The criteria in selecting the stations are as follows:

(1) At least one station for each State is selected.
(2) Stations should be sufficiently spread out to provide a good geographic distribution.
(3) Only weighing raingage stations with measurement resolution of 0.01 in. of rain depth are selected. Preferences is given to NWS first order stations. Stations using Fischer & Porter gages of 0.1 in. resolution are rejected.
(4) At least 15 continuous years of record should be available. The only exceptions are three NWS first-order stations: San Juan, Puerto Rico (12 years); Burlington, Iowa (14 years); and Seattle-Tacoma, Washington (14 years).
(5) For the season to be analyzed for the selected station, there should not be excessive amounts of missing or accumulated rainfall data.
(6) Preliminary screening of the data reveals no suspicious quality of the data in terms of either original data recording or later data transcribing.

Presumably the design rainstorm is a heavy rainstorm, most likely a convection type rainstorm of relatively large depth. To avoid including snow storms in the analysis, the "season" selected for the present study is the six months from April 16 to October 15 of each year, except for the stations in Hawaii, California, and at Tucson and Yuma in Arizona, Astoria, Bandon, Eugene, and Portland in Oregon, and Olympia and Seattle-Tacoma in Washington. For these 21 stations, the data of entire year are analyzed.

TABLE 1. NWS Precipitation Stations Selected for Hourly Data Analysis

Location		Station No.	Beginning of Data Period[§]	Period Analyzed	No. of Rainstorms Analyzed*
BIRMINGHAM AP	AL	10831	1 JUN 1948	1948 - 1978	1317
GUNTERSVILLE	AL	13578	1 JUL 1948	1962 - 1978	568
HUNTSVILLE AP	AL	14064	1 NOV 1958	1959 - 1978	876
MOBILE AP	AL	15478	1 JUL 1948	1958 - 1978	1108
MONTGOMERY AP	AL	15550	1 JUL 1948	1948 - 1978	1035
PAINT ROCK	AL	16226	1 JUL 1948	1948 - 1978	1144
TONEY	AL	18259	1 JUL 1948	1948 - 1978	1052
FLAGSTAFF AP	AZ	23010	1 JAN 1950	1950 - 1978	770
PHOENIX AP	AZ	26481	1 JUL 1948	1954 - 1978	203
TUCSON AP	AZ	28820	1 JUL 1948	1948 - 1978	1114
WINSLOW AP	AZ	29439	1 JUL 1948	1948 - 1978	579
YUMA AP	AZ	29660	1 SEP 1948	1949 - 1978	293
ALICIA	AR	30064	1 MAY 1948	1948 - 1978	927
FORT SMITH AP	AR	32574	2 MAY 1948	1949 - 1978	1086
PRESCOTT SCS	AR	35910	3 MAY 1948	1948 - 1978	1050
BAKERSFIELD AP	CA	40442	1 JUL 1948	1948 - 1978	827
EUREKA CI	CA	42910	1 JUL 1948	1948 - 1978	3342
FRESNO AP	CA	43257	1 JUL 1948	1948 - 1978	1058
LOS ANGELES AP	CA	45114	1 JUL 1948	1948 - 1978	671
OAKLAND AP	CA	46335	1 JUL 1948	1948 - 1978	1518
RED BLUFF AP	CA	47292	1 JUL 1948	1948 - 1978	1521
SACRAMENTO CI	CA	47633	1 JAN 1936	1936 - 1978	1935
SAN FRAN. AP	CA	47769	1 JUL 1948	1948 - 1978	1530
SAN FRAN. CI	CA	47772	1 JUL 1948	1948 - 1978	1592
SANTA MARIAIAP	CA	47946	1 JUL 1948	1948 - 1978	1069
ALAMOSA AP	CO	50130	1 SEP 1948	1949 - 1978	703
DENVER AP	CO	52220	1 AUG 1948	1949 - 1978	810
GRANADA	CO	53477	1 AUG 1948	1949 - 1978	732
GRAND JUNCTION	CO	53488	1 AUG 1948	1949 - 1978	627
PUEBLO AP	CO	56740	1 JUN 1954	1954 - 1978	590
BRIDGEPORT AP	CT	60806	1 JUL 1948	1948 - 1978	1216
HARTFORD AP	CT	63456	1 AUG 1954	1955 - 1978	1023
WILMINGTON AP	DE	79595	1 AUG 1948	1949 - 1978	887
DAYTONA BH AP	FL	82158	1 JAN 1942	1942 - 1978	1917
JACKSONVILLE	FL	84358	1 JAN 1948	1949 - 1978	1491
KEY WEST AP	FL	84570	1 AUG 1948	1958 - 1978	940
LAKELAND CI	FL	84797	1 MAR 1943	1943 - 1978	1973
MIAMI AP	FL	85663	1 AUG 1948	1949 - 1978	1791
TALLAHASSEE	FL	88758	1 AUG 1948	1958 - 1978	1036
TAMPA WSMO	FL	88788	1 JUN 1948	1948 - 1978	1162
WEST PALM BH	FL	89525	1 JAN 1942	1942 - 1978	2310

TABLE 1. NWS Precipitation Stations Selected for Hourly Data Analysis (Continued)

Location		Station No.	Beginning of Data Period[5]	Period Analyzed	No. of Rainstorms Analyzed*
ATHENS AP	GA	90435	1 AUG 1948	1958 - 1978	876
ATLANTA AP	GA	90451	1 JUN 1948	1948 - 1978	1243
AUGUSTA AP	GA	90495	1 AUG 1948	1949 - 1978	1155
COLUMBUS AP	GA	92166	1 JUN 1948	1948 - 1978	1293
MACON	GA	95443	1 JAN 1949	1949 - 1978	1162
ROME AP	GA	97610	1 JUN 1948	1948 - 1978	1307
SAVANNAH AP	GA	97847	1 JUN 1948	1948 - 1978	1508
BOISE AP	ID	101022	1 JUL 1948	1948 - 1978	611
LEWISTON AP	ID	105241	1 OCT 1949	1954 - 1978	721
POCATELLO AP	ID	107211	1 JUL 1948	1948 - 1978	758
CAIRO CI	IL	111166	1 JUL 1948	1948 - 1978	1271
CHICAGO MIDWAY	IL	111577	1 JUL 1948	1948 - 1978	1394
PEORIA AP	IL	116711	1 JUL 1948	1948 - 1978	1383
SPRINGFIELD AP	IL	118179	1 JUL 1948	1948 - 1978	1342
EVANSVILLE AP	IN	122738	1 JUL 1948	1948 - 1978	1284
FORT WAYNE AP	IN	123037	1 JUL 1948	1948 - 1978	1462
INDIANAPOLIS	IN	124259	1 JUL 1948	1948 - 1978	1376
SOUTH BEND AP	IN	128187	1 JUL 1948	1948 - 1978	1482
BURLINGTON	IA	131060	1 DEC 1964	1965 - 1978	561
DES MOINES AP	IA	132203	1 AUG 1948	1949 - 1978	1294
DUBUQUE AP	IA	132367	1 FEB 1951	1951 - 1978	1254
IOWA CITY	IA	134131	1 AUG 1948	1949 - 1978	1259
SIOUX CITY AP	IA	137708	1 AUG 1948	1949 - 1978	1224
WATERLOO AP	IA	138706	1 MAY 1956	1956 - 1978	985
COLUMBUS	KS	141740	1 AUG 1948	1949 - 1978	1200
CONCORDIA AP	KS	141767	1 JUN 1962	1962 - 1978	701
DODGE CITY AP	KS	142164	1 AUG 1948	1949 - 1978	971
GOODLAND AP	KS	143153	1 AUG 1948	1949 - 1978	918
TOPEKA AP	KS	148167	1 SEP 1948	1949 - 1978	1163
WICHITA AP	KS	148830	1 DEC 1953	1954 - 1978	920
LEXINGTON AP	KY	154746	1 AUG 1948	1949 - 1978	1450
LOUISVILLE AP	KY	154954	1 AUG 1948	1949 - 1978	1349
BATON ROUGE AP	LA	160549	1 OCT 1947	1948 - 1978	1227
NEW ORLEANS AP	LA	166660	1 JAN 1954	1954 - 1978	1156
SHREVEPORT AP	LA	168440	1 OCT 1947	1960 - 1978	610
CARIBOU AP	ME	171175	1 MAY 1948	1948 - 1978	1697
PORTLAND AP	ME	176905	1 MAY 1948	1948 - 1978	1293
BALTIMORE AP	MD	180465	1 AUG 1948	1949 - 1978	1104
BALTIMORE CI	MD	180470	1 MAY 1948	1948 - 1978	1231
BELTSVILLE	MD	180705	1 JAN 1949	1949 - 1978	1156
SINES DEEP CRK	MD	188315	1 SEP 1948	1949 - 1978	2035

TABLE 1. NWS Precipitation Stations Selected for Hourly Data Analysis (Continued)

Location		Station No.	Beginning of Data Period[5]	Period Analyzed	No. of Rainstorms Analyzed*
BOSTON AP	MA	190770	1 MAY 1948	1948 - 1978	1345
NEW BEDFORD	MA	195246	1 MAY 1948	1948 - 1978	1088
WORCESTER AP	MA	199923	1 JUN 1948	1957 - 1978	971
DETROIT	MI	202103	1 OCT 1959	1960 - 1978	907
FLINT AP	MI	202846	1 JUL 1948	1958 - 1978	965
LANSING AP	MI	204641	1 JUL 1948	1959 - 1978	949
MARQUETTE CI	MI	205178	1 JUL 1948	1948 - 1978	1608
MUSKEGON AP	MI	205712	1 JUL 1948	1948 - 1978	1345
SAULT ST.MARIE	MI	207366	1 JUL 1948	1948 - 1978	1783
DULUTH AP	MN	212248	1 AUG 1948	1949 - 1978	1452
MINN-ST PAUL,	MN	215435	1 AUG 1948	1949 - 1978	1361
ROCHESTER,	MN	217004	1 AUG 1948	1949 - 1978	1396
ST CLOUD AP	MN	217294	1 AUG 1948	1949 - 1978	1318
MERIDIAN AP	MS	225776	1 JUN 1948	1949 - 1978	1159
ALTON	MR	230127	1 AUG 1948	1949 - 1978	1100
HIGH POINT	MR	233849	1 NOV 1948	1949 - 1978	1292
ST LOUIS AP	MR	237455	1 AUG 1948	1949 - 1978	1200
SPRINGFIELD AP	MR	237976	1 AUG 1948	1949 - 1978	1289
BILLINGS AP	MT	240807	1 JUL 1948	1948 - 1978	937
GLENDIVE	MT	243581	1 SEP 1948	1949 - 1978	1054
GREAT FALLS AP	MT	243751	1 JUL 1948	1949 - 1978	1046
HELENA AP AP	MT	244055	1 JUL 1948	1948 - 1978	963
KALISPELL AP	MT	244558	1 JUN 1949	1953 - 1978	993
MILES CITY AP	MT	245690	1 AUG 1948	1952 - 1978	111
MISSOULA AP	MT	245745	1 JUL 1948	1948 - 1978	1102
GRAND ISLAND	NE	253395	3 AUG 1948	1949 - 1978	1148
NORTH PLATTE	NE	256065	10 AUG 1948	1949 - 1978	1021
SCOTTSBLUFF AP	NE	257665	12 SEP 1948	1949 - 1978	928
VALENTINE AP	NE	258760	1 AUG 1948	1949 - 1978	1017
ELKO AP	NV	262573	1 JUL 1948	1948 - 1978	572
ELY AP	NV	262631	1 JUL 1948	1948 - 1978	675
LAS VEGAS AP	NV	264436	1 JAN 1949	1949 - 1978	166
RENO AP	NV	266779	1 JUL 1948	1948 - 1978	356
WINNEMUCCA AP	NV	269171	1 JUL 1948	1948 - 1978	472
CONCORD AP	NH	271683	1 MAY 1948	1948 - 1978	1355
MT WASHINGTON	NH	275639	1 MAY 1948	1948 - 1978	1871
NEWARK AP	NJ	286026	1 MAY 1948	1948 - 1978	1306
TRENTON CI	NJ	288883	2 MAY 1948	1948 - 1978	1278

TABLE 1. NWS Precipitation Stations Selected for Hourly Data Analysis (Continued)

Location	Station No.	Beginning of Data Period§	Period Analyzed	No. of Rainstorms Analyzed*
ALBUQUERQUE AP NM	290234	1 OCT 1947	1949 - 1978	579
CARRIZOZO NM	291515	1 OCT 1947	1948 - 1978	847
CLAYTON AP NM	291887	1 OCT 1947	1948 - 1978	891
WHITE SANDS NM	299686	1 NOV 1947	1949 - 1978	524
ALBANY AP NY	300042	1 MAY 1948	1948 - 1978	1464
BINGHAMPTON NY	300687	1 JUL 1951	1951 - 1978	1449
BUFFALO AP NY	301012	1 MAY 1948	1948 - 1978	1523
CANTON NY	301185	1 MAY 1948	1948 - 1978	1603
N.Y.CENTRL PK. NY	305801	1 MAY 1948	1948 - 1978	1329
NY LA GUARDIA NY	305811	1 MAY 1948	1948 - 1978	1241
ROCHESTER AP NY	307167	1 MAY 1948	1948 - 1978	1419
SYRACUSE AP NY	308383	1 MAY 1948	1948 - 1978	1604
WOODLANDS-ARD. NY	309576	1 MAY 1948	1948 - 1978	1338
ASHEVILLE NC	310301	1 AUG 1902	1903 - 1978	3960
CAPE HATTERAS NC	311458	1 MAY 1957	1957 - 1978	999
CHARLOTTE AP NC	311690	1 JUN 1948	1948 - 1978	1292
RALEIGH-DUR.AP NC	317069	1 JUN 1948	1948 - 1978	1279
WILMINGTON AP NC	319457	1 OCT 1949	1950 - 1978	1373
BISMARCK AP ND	320819	5 AUG 1948	1949 - 1978	1031
FARGO AP ND	322859	9 AUG 1948	1949 - 1978	1161
CINCINNATI A. OH	331561	14 AUG 1948	1949 - 1978	1383
CLEVELAND AP OH	331657	1 AUG 1948	1949 - 1978	1494
COLUMBUS AP OH	331786	5 AUG 1948	1949 - 1978	1455
TOLEDO AP OH	338357	1 JAN 1955	1955 - 1978	1103
YOUNGSTOWN AP OH	339406	8 AUG 1948	1949 - 1978	1579
GREAT SALT P. OK	343740	1 OCT 1947	1948 - 1978	815
KINGSTON OK	344865	1 OCT 1947	1948 - 1978	944
OKLAHOMA CITY OK	346661	1 OCT 1947	1948 - 1978	1029
TULSA AP OK	348992	1 OCT 1947	1948 - 1978	1089
WOODWARD FD. S. OK	349762	1 JAN 1949	1949 - 1978	839
ASTORIA AP OR	350328	1 MAR 1953	1953 - 1978	5076
BANDON OR	350471	1 OCT 1948	1949 - 1978	4387
BURNS CI OR	351176	1 AUG 1948	1949 - 1978	614
EUGENE AP OR	352709	5 JUL 1948	1948 - 1978	3768
LAKEVIEW OR	354670	1 OCT 1948	1949 - 1978	749
MEDFORD AP OR	355429	1 DEC 1948	1949 - 1978	633
PENDLETON OR	356546	4 DEC 1948	1949 - 1978	680
PORTLAND AP OR	356751	3 NOV 1948	1949 - 1978	4108

TABLE 1. NWS Precipitation Stations Selected for Hourly Data Analysis (Continued)

Location		Station No.	Beginning of Data Period[5]	Period Analyzed	No. of Rainstorms Analyzed*
ALLENTOWN AP	PA	360106	1 MAY 1948	1948 - 1978	1442
ERIE AP	PA	362682	1 MAY 1948	1948 - 1978	1176
HARRISBURG	PA	363699	1 MAY 1948	1948 - 1978	1387
JOHNSTOWN	PA	364390	1 MAY 1948	1948 - 1978	1686
PHILADELPHIA	PA	366889	1 JAN 1900	1900 - 1978	3330
PITTSBURGH CI	PA	366997	1 MAY 1948	1948 - 1978	1548
SMETHPORT	PA	368190	1 MAY 1948	1948 - 1978	1626
W-BARRE-SCRAN.	PA	369705	1 FEB 1964	1964 - 1978	800
WILLIAMSPORT	PA	369728	1 MAY 1948	1950 - 1978	1457
BLOCK ISLAND	RI	370896	1 MAY 1948	1948 - 1978	1083
PROVIDENCE AP	RI	376698	1 MAY 1948	1948 - 1978	1208
CHARLESTON CI	SC	381549	1 JUN 1948	1948 - 1978	1347
COLUMBIA	SC	381939	1 AUG 1948	1954 - 1978	1080
GREENVILLE-SPA.	SC	383747	1 OCT 1962	1963 - 1978	684
ABERDEEN AP	SD	390020	1 AUG 1948	1949 - 1978	1042
RAPID CITY AP	SD	396937	10 AUG 1948	1949 - 1978	1082
SIOUX FALLS AP	SD	397667	1 AUG 1948	1949 - 1978	1188
BRISTOL AP	TN	401094	1 SEP 1948	1949 - 1978	1458
CHATTANOOGA	TN	401656	5 SEP 1948	1949 - 1978	1365
KNOXVILLE AP	TN	404950	4 SEP 1948	1949 - 1978	1394
MEMPHIS AP	TN	405954	1 SEP 1948	1949 - 1978	1131
NASHVILLE AP	TN	406402	3 SEP 1948	1949 - 1978	1303
ABILENE AP	TX	410016	23 DEC 1940	1948 - 1978	802
AMARILLO AP	TX	410211	4 FEB 1941	1949 - 1978	886
AUSTIN AP	TX	410428	22 AUG 1942	1949 - 1978	803
BROWNSVILLE AP	TX	411136	21 APR 1942	1949 - 1978	738
CORPUS CHRISTI	TX	412015	1 OCT 1947	1949 - 1978	783
DEL RIO AP	TX	412360	15 MAY 1951	1964 - 1978	342
EL PASO AP	TX	412797	1 AUG 1942	1949 - 1978	704
GALVESTON CI	TX	413430	1 JAN 1940	1949 - 1978	873
LUBBOCK AP	TX	415411	1 APR 1940	1958 - 1978	530
MIDLAND AP	TX	415890	26 FEB 1941	1954 - 1978	544
PORT ARTHUR AP	TX	417174	1 DEC 1947	1953 - 1978	959
SAN ANTONIA	TX	417945	13 JAN 1941	1949 - 1978	798
WACO AP	TX	419419	5 FEB 1941	1949 - 1978	767
WICHITA FALLS	TX	419729	2 MAY 1940	1949 - 1978	845
MILFORD AP	UT	425654	1 JUL 1948	1949 - 1978	575
SALT LAKE CITY	UT	427598	1 JUL 1948	1948 - 1978	791

TABLE 1. NWS Precipitation Stations Selected for Hourly Data Analysis (Concluded)

Location		Station No.	Beginning of Data Period[§]	Period Analyzed	No. of Rainstorms Analyzed*
BURLINGTON AP	VT	431081	1 MAY 1948	1948 - 1978	1747
NEWPORT	VT	435542	1 MAY 1948	1948 - 1978	1952
NORFOLK AP	VA	446139	5 AUG 1948	1954 - 1978	1032
RICHMOND AP	VA	447201	4 AUG 1948	1949 - 1978	1199
ROANOKE AP	VA	447285	11 AUG 1948	1949 - 1978	1331
WASH. NATIONAL	VA	448906	1 MAY 1948	1948 - 1978	1232
COULEE DAM	WA	451767	5 JUL 1948	1948 - 1978	667
OLYMPIA AP	WA	456114	6 JUL 1948	1955 - 1978	3764
SEATTLE-TACOMA	WA	457473	4 JUL 1948	1965 - 1978	1925
SPOKANE AP	WA	457938	8 AUG 1948	1949 - 1978	797
WALLA WALLA CI	WA	458931	1 JUL 1948	1948 - 1978	688
YAKIMA AP	WA	459465	1 SEP 1948	1949 - 1978	395
CHARLESTON AP	WV	461570	1 AUG 1948	1949 - 1978	1449
ELKINS AP	WV	462718	1 AUG 1948	1949 - 1978	1968
PARKERSBURG CI	WV	466859	4 AUG 1948	1949 - 1978	1445
GREEN BAY AP	WI	473269	1 AUG 1948	1949 - 1978	1348
MADISON AP	WI	474961	1 AUG 1948	1949 - 1978	1366
MILWAUKEE AP	WI	475479	1 SEP 1948	1949 - 1978	1347
PHELPS DEERSK.	WI	476518	1 AUG 1948	1949 - 1978	1678
SHERIDAN AP	WY	488155	1 AUG 1948	1949 - 1978	1018
FAIRBANKS AP	AK	502968	4 SEP 1949	1963 - 1978	553
JUNEAU AP	AK	504100	1 SEP 1949	1963 - 1978	1363
LIHUE AP KAUAI	HI	515580	1 OCT 1962	1963 - 1978	1927
HONOLULU AP	HI	521919	1 OCT 1962	1963 - 1978	953
HILO AP MAKA.	HI	561492	2 OCT 1962	1963 - 1978	4515
SAN JUAN AP	PR	668812	1 JAN 1967	1967 - 1978	659
					74884

[§]Digitized data for all stations end in December 1978 except Beltsville, MD which ends on 22 September 1978.

*Excluding rainstorms having durations of 1-hour and 6 or more hours.

For each station the rainstorms in the specified season are grouped according to the duration. Only 2, 3, 4, and 5-hour durations are analyzed. Usually more than half of the rainstorms have a nominal duration of one hour. These 1-hour rainstorms are not analyzed because they provide only the trivial results of $\bar{t}^{\circ} = 0.5$ and $a^{\circ} = 0.5$. Durations of 6 hours or longer have too few rainstorms to give statistically meaningful results and hence not analyzed.

From the hourly data of the NWS stations selected, more than one million rainstorms were screened. Of these a total of 274,884 rainstorms of 2, 3, 4, and 5-hour durations were analyzed.

The NWS hourly precipitation data were supplied in magnetic tapes of the following specifications: 9-track, 1600 bpi, EBCDIC, odd parity, phase encoded. The data were entered in the NWS standard card image format Deck 488 (TD-9657) as shown in Fig. 6. However, it was found that none of the stations screened have the data entered exactly according to the format. Three of the most common problems are:

(1) Each date with rainfall there are two cards with the first 12 hours on the first card and the second 12 hours on the second card (Fig. 6). However, often these two cards are reversed.
(2) The precipitation data are missing for one or more hours.
(3) The precipitation data for one or more hours are not recorded in the proper hour, but the accumulated depth for several hours is known and recorded in the last of the accumulated hours.

The computer program SATH used in this study and described in Vol. III can detect and handle these three data problems. The output of the computer program prints a list of the missing and accumulated data together with tables of results for each station analyzed. Because of the large volume of the list, the missing and accumulated data for the 222 NWS stations analyzed are not printed in this report set. A file of the missing and accumulated data listing is kept at the Hydrosystems Laboratory of the University of Illinois at Urbana-Champaign for future reference.

Other NWS hourly precipitation data problems encountered in the analysis include the following.

CARD CONTENT

Col-umns	Item	Code	Remarks
1-2	State Number (See next page)		01 Alabama, 02 Arizona, 03 Arkansas, 04 California, 05 Colorado, 06 Connecticut, 07 Delaware, 08 Florida, 09 Georgia, 10 Idaho, 11 Illinois, 12 Indiana, 13 Iowa, 14 Kansas, 15 Kentucky, 16 Louisiana, 17 Maine, 18 Maryland, 19 Massachusetts, 20 Michigan, 21 Minnesota, 22 Mississippi, 23 Missouri, 24 Montana, 25 Nebraska, 26 Nevada, 27 New Hampshire, 28 New Jersey, 29 New Mexico, 30 New York, 31 North Carolina, 32 North Dakota, 33 Ohio, 34 Oklahoma, 35 Oregon, 36 Pennsylvania, 37 R. I., Island, 38 South Carolina, 39 South Dakota, 40 Tennessee, 41 Texas, 42 Utah, 43 Vermont, 44 Virginia, 45 Washington, 46 West Virginia, 47 Wisconsin, 48 Wyoming, 50 Alaska, 51 Kauai, Island Hawaiian, 52 Oahu, " ", 53 Molokai, " ", 54 Lanai, " ", 55 Maui, " ", 56 Hawaii, " ", 66 Bahama Islands, 66 Puerto Rico, 67 Virgin Islands, 68 Honduras, 81 Nicaragua, 82 Mexico, 83 Swan Island, 90 Canada, 99 Misc. Stations
3-6	Climatological Station No.		Station number list is record at National Weather Records Center. Number assigned alphabetically within state according to Rand McNally Atlas, 1948 Edition.
7-8	Year		Last two digits. 54 = 1954. Period of record generally August 1948 to present.
9-10	Month	01-12	January, December, respectively.
11-12	Day	01-31	Day of month.
13	Card Number		Card numbers 1 and 2 are the only cards used in this deck. Each hourly field is made up of three columns; whole inches, tenths and hundredths of inches. "X" overpunch in inch column equals 10 inches; 12 overpunch in inch column equals 20 inches. For example, 10.27 inches in the hourly column will be punched X 027; 21.77 punched 12/177. Amounts above the over-punch values are punched in the normal manner.

	Card No. 1 Hour Ending LST*	Card No. 2 Hour Ending LST*
14-16	01	13
17-19	02	14
20-22	03	15
23-25	04	16
26-28	05	17
29-31	06	18
32-34	07	19
35-37	08	20
38-40	09	21
41-43	10	22
44-46	11	23
47-49	12	24
50-53	Blank	Daily Total
54-57	Blank	Monthly Total. When no precipitation occurred for the month, the value was punched 0000 on the first day of the current month.
58-78	Blank	Blank
79-80	Blank	Next day with precipitation, beginning or ending day of missing or accumulated data. Cols. 79-80 for last day of the month punched, should always be 01.

* LST = Local Standard Time

Notes

(1) The first day of the month is always punched for both No. 1 and No. 2 cards. When no precipitation occurs, the daily total is punched XBBB. If no precipitation occurred during the entire current month, the monthly total is punched 0000. This practice is used only on the first day of the month.

Hourly Data

(2) Missing data Blank all columns in appropriate field.
(3) Trace is punched XBBB, same as no precipitation.
(4) Accumulative data (see Punching Practices) punched as 0XB.
(5) Hourly values of 0.01 and greater is punched; e. g., 0.01 is punched 001; .10 punched 010; 1.00 punched 100; 10.00 punched X 000; 12.36 punched X/236; 20.36 punched 12/036. (12 equals 12 overpunch of whole inch column.)
(6) Daily and monthly values are punched as follows: Missing data - all columns BBBB, no precipitation or trace XBBB; accumulative data 00XB.
(7) Monthly total columns, 54-57, punched on No. 2 card only for last day of month with precipitation, or on the first day of the month when no precipitation occurred.

More detailed instructions are given in Punching Practices on pages 1 and 2.
Blanks are indicated by "B".

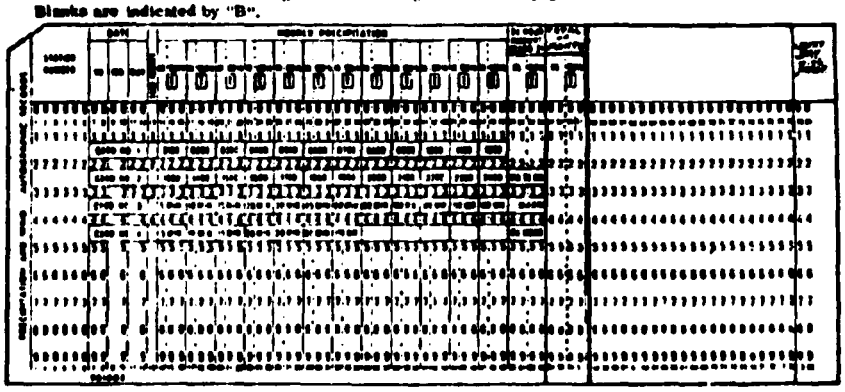

Fig. 6. NWS hourly precipitation data card format

(4) One of the two cards of a raining date is missing.

(5) Both cards of a raining date are missing. These can only be detected if the "next rain date" information in the preceding card is correct.

(6) The "next rain date" information (last two columns of the second card of a date) is missing, incorrect date entered, or incorrectly entered in wrong columns (e.g., in columns 78 and 79), or entered with incorrect symbols (e.g., @, !, #, <, 2., 3Z).

(7) First-day cards of a month are missing.

Because of these data problems the NWS hourly precipitation data were first printed out, examinated, and corrected for the (4) through (7) and other mistakes before analysis.

In addition to the above problems, there is no assurance that the data entered on the tapes are correct. For example, a not-so-unusual case is the data being entered at incorrect time (one hour off) during day-light savings time. Unfortunately, for most of the stations it is impossible or impractical to check such incorrect data.

B. USDA ARS Rainfall Data

The five-minute rainfall data were obtained from the precipitation data of the agricultural experimental watersheds supplied by the U.S. Department of Agriculture, Agricultural Research Service (USDA ARS) Water Data Laboratory. The data were collected from the raingages at the USDA ARS agricultural experimental watersheds and digitized and recorded on magnetic tapes in break-point mass curve form, i.e., recording the amount and time of change as a break point when a change of the rate of precipitation occurs.

From the data supplied by the USDA ARS Water Data Laboratory, 13 stations geographically distributed over the United States and each having a record longer than 10 years were selected for the present study. The break-point data for the "season" of April 16 to October 15 of these stations were converted into 5-minute data for analysis. The stations and their periods of record are listed in Table 2.

There are two ways to transform the break-point data into 5-minute data: clock-time five minutes or real-time five minutes. The clock-time 5-minute data record the amount of precipitation in a five-minute clock time intervals,

TABLE 2. USDA SEA-AR Precipitation Stations Selected for Data Analysis

Location	Station	Period	Number of Years	Number of Rain Storms Analyzed*
Bentonville, AR	000005	5 Sep 1938 - 8 Sep 1947	10	51
Safford, AZ	000002	3 Jan 1939 - 21 Oct 1975	37	256
Reynolds, ID	012X29	6 Jan 1962 - 31 Dec 1975	14	131
Treynor, IA	000011	1 Jan 1964 - 2 Nov 1975	12	173
McCreddie, MO	000004	1 Jan 1941 - 31 Dec 1974	34	568
Hastings, NE	RGPC31	25 June 1938 - 29 Oct 1967	30	199
Albuquerque, NM	000001	13 Aug 1939 - 31 Oct 1972	34	271
Coshocton, OH	00Y102	2 Jan 1937 - 31 Dec 1978	42	974
Cherokee, OK	000G09	22 Aug 1941 - 21 Dec 1967	27	294
Guthrie, OK	000G12	20 Feb 1937 - 20 Dec 1956	20	543
Danville, VT	000001	10 Sep 1958 - 31 Dec 1973	16	424
Blacksburg, VA	P08R02	9 July 1957 - 31 Dec 1972	16	207
Moorefield, WV	R01P01	17 Mar 1958 - 31 Dec 1967	10	134

*For Δt = 5 min and t_d = 10, 15, 20, 25, 30, 60, 120 min only.

i.e., 1-5, 6-10, ... 56-60 minutes of each hour. The rainstorm may not start and end at the beginning of each time interval. Conversely, the real-time 5-minute data starts at the commencement of the precipitation and continuous on in suceeding 5-minute intervals while the beginning of each interval needs ot and usually is not a convenient clock time. Although the clock-time data could give either larger or smaller values of $\bar{t}^{\circ}$ and a° than the actual values for a rainstorm, intuitively the statistical means of $\bar{t}^{\circ}$ and a° for a large number of rainstorms would tend to be smaller for the real-time data than for the clock-time data.

Consider the true duration of a rainstorm as $t'_d = n\Delta t + \varepsilon$ where Δt is the constant time interval, n is an integer, and ε is the residue when t'_d cannot be divided evenly by Δt. As shown in Fig. 7, the nominal duration of a rainstorm corresponding to Δt is $t_d = (n + 1)\,\Delta t$ or $t_d = (n + 2)\,\Delta t$ depending on whether the lag, L, of the actual commencement of rainfall after the beginning of the first Δt is less or greater than $\Delta t - \varepsilon$. If $\varepsilon = 0$, $t_d = n\Delta t = t'_d$ is also a rare possibility.

Let the true nondimensional triangular hyetograph peaking time $a'^{\circ} = a'/t'_d$ where a' is the dimensional peaking time. The nominal nondimensional peaking time is $a^{\circ} = a/t_d$ where $a = a' + L$. Accordingly, for the case $L < \Delta t - \varepsilon$ and hence $t_d = (n+1)\,\Delta t$,

$$\frac{a^{\circ}}{a'^{\circ}} = \left[1 - \frac{1 - \frac{\varepsilon}{\Delta t}}{n + 1}\right]\left[1 + \frac{1}{a'^{\circ}}\left(\frac{L/\Delta t}{n + \frac{\varepsilon}{\Delta t}}\right)\right]$$

$$\text{for } \frac{L}{\Delta t} < 1 - \frac{\varepsilon}{\Delta t} \text{ and } 0 < \frac{L}{\Delta t} < 1 \qquad (4.1)$$

For the case $L > \Delta t - \varepsilon$ and hence $t_d = (n + 2)\,\Delta t$,

$$\frac{a^{\circ}}{a'^{\circ}} = \left[1 - \frac{2 - \frac{\varepsilon}{\Delta t}}{n + 2}\right]\left[1 + \frac{1}{a'^{\circ}}\left(\frac{L/\Delta t}{n + \frac{\varepsilon}{\Delta t}}\right)\right]$$

$$\text{for } \frac{L}{\Delta t} > 1 - \frac{\varepsilon}{\Delta t} \text{ and } \frac{1}{2} < \frac{L}{\Delta t} < 1 \qquad (4.2)$$

Assume equal probability of L as well as ε to vary within the range of 0 to Δt, the expected value of a°/a'° for a large number of rainstorms can be obtained from the joint probability of the cases $L < \Delta t - \varepsilon$ and $L > \Delta t - \varepsilon$ and integration of Eqs. 4.1 and 4.2. The result is that for $n = 2$ and 3 the nominal peaking time a° is about 10% larger than the true a'°. For larger values of n the error is less. This analysis of a°/a'° is applicable to the 5-minute as well as hourly data.

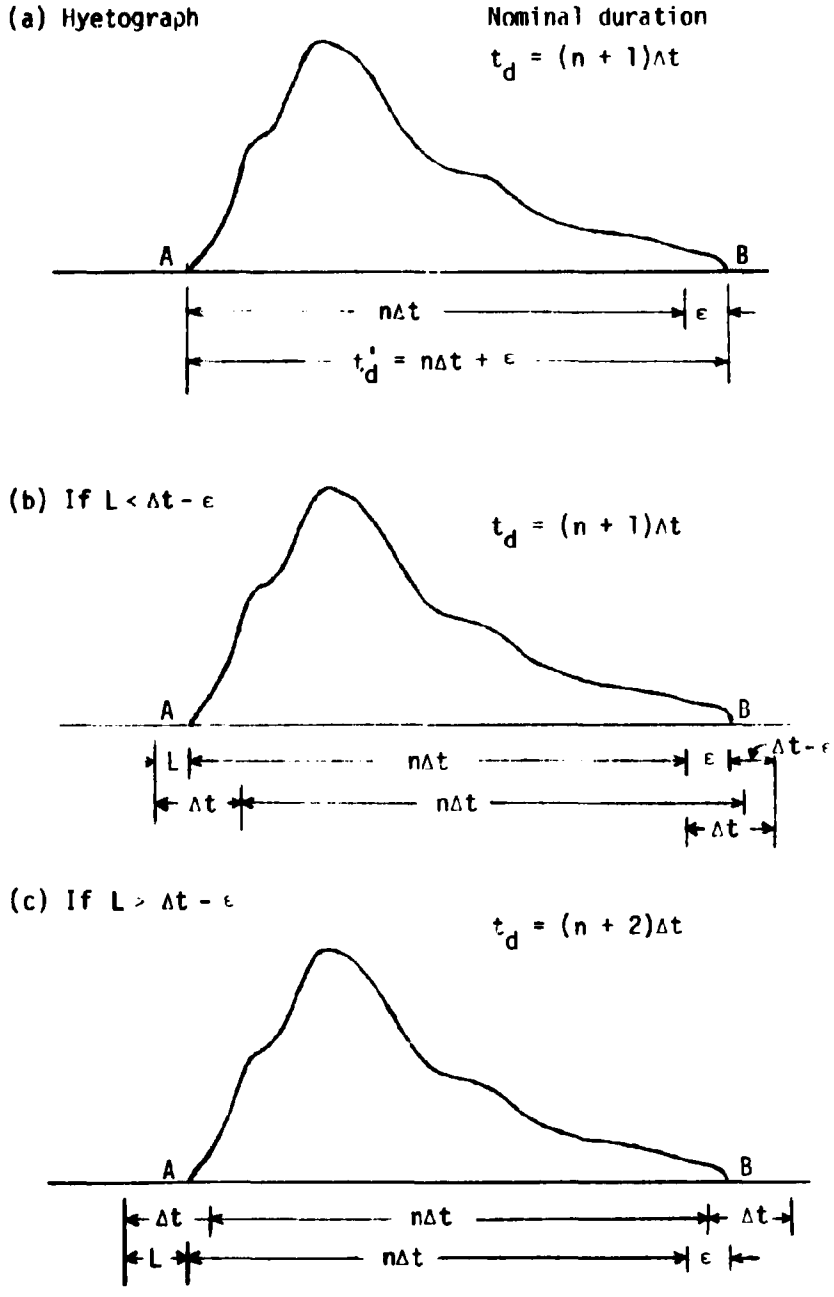

Fig. 7. Actual and nominal durations of rainstorm

The ARS break-point data for McCreddie, Missouri and Coshocton, Ohio were converted into both 5-minute clock time and 5-minute real time format. The results of analysis of these two sets of data for n = 2 and 3 indicate that indeed the clock-time results of a° and $\bar{t}^{\circ}$ are generally higher than those from the real-time data, and approaching a 10% difference as the number of rainstorms becomes large.

The NWS hourly data are in clock hour intervals. For the sake of consistency and in view of the range and nature of differences between the clock-time and real-time data and the convenience and relatively lower cost in obtaining clock-time data in comparing to the real-time data, it was decided that the ARS data were to be deduced and analyzed in clock-time format rather than the real-time format. Again, as for the NWS hourly data, with emphasis on heavy convective type rainstorms and to minimize the chance of considering snowstorms, the "season" in which the data were analyzed is from 16 April to 15 October of each year. For the five-minute data, the durations analyzed are 10, 15, 20, 25, 30, 60 and 120 minutes. Altogether 4220 rainstorms from the 5-minute data were analyzed.

V. RESULTS OF ANALYSIS

This chapter presents a summary and discussion of the results of the analysis of the NWS hourly and ARS 5-minute data to establish the triangular hyetograph method for design of small highway drainage facilities. Detail results of the data analysis are kept on file at FHWA and at the Hydrosystems Laboratory of the University of Illinois at Urbana-Champaign and sample results are presented in Vol. 4 of this report set.

A. Rainstorm Classifications for Analysis

Based on physical reasoning, one would postulate that the temporal pattern of convective type rainstorms are generally different from that of cyclonic type rainstorms. For design of small drainage facilities, the former type which is characterized by relatively short duration and heavy intensity is of particular interest. Since the type of rainstorms is available neither from the NWS hourly data nor from the ARS data, it was decided to group the rainfall data according to the rain depth on the basis that for the group with large depths the majority of the rainstorms are likely to be dominant by convective type, whereas the small depth group contains primarily cyclonic type rainstorms. Because there exists no information on quantitative differentiation of convective type rainstorms from cyclonic type rainstorms based on the depth and duration of rainfall, the rainstorms of a given duration at a given location is arbitrarily classified into the following four cumulative depth groups:

(1) $D \geq 2D_{mean}$ in which D is the rain depth of the storm, D_{mean} is the mean depth of all the rainstorms having the same duration at the given location;

(2) $D \geq D_{mean}$;

(3) $D \geq 0.5\ D_{mean}$; and

(4) All rainstorms having the same duration at the location.

Originally the classification was made according to the following mutually exclusive depth ranges:

(5) $D \geq 2D_{mean}$;

(6) $2D_{mean} > D \geq D_{mean}$;

(7) $D_{mean} > D \geq 0.5D_{mean}$;

(8) $0.5D_{mean} > D \geq 0.01$ in.

However, in the process of the analysis it was found that, despite the large total number of rainstorms utilized in this investigation, the number of storms in each of the classes of (5) through (8) of given location and duration is often not sufficiently large to give statistically significant, stable results. Regrouping according to (1) through (4) yields more stable results and still preserving the significance of depth ranges.

As mentioned previously, the rainstorms listed in Table 1 for each of the NWS stations are classified according to durations as 2, 3, 4, and 5-hour rainstorms, and for each duration, further classified into the four depth groups, (1) through (4) as listed in Table 3. The number of rainstorms and the computed mean values of the nondimensional rainstorm parameters, a°, $\bar{t}^\circ$, and G_1°, for each class are summarized in Tables A1 to A222 in Appendix A of this volume. More detailed results of the mean, standard deviation, and range of 12 rainstorm parameters (t_d, D, i, $\bar{t}$, G, dimensional and nondimensional time standard deviation, G_1°, $\bar{t}^\circ$, dimensional and nondimensional depth standard deviation, a, b, a°, b°) are tabulated in Vol. 4 of this report set.

TABLE 3. Depth and Duration Classification of NWS Hourly Rainfall Data Analyzed

Depth Range \ Duration, hr.	2	3	4	5
$D \geq 2D_{mean}$	✓	✓	✓	✓
$D \geq D_{mean}$	✓	✓	✓	✓
$D \geq 0.5\ D_{mean}$	✓	✓	✓	✓
$D \geq 0.01"$	✓	✓	✓	✓

Similarly, the ARS 5-minute data were grouped into 7 durations and 4 depth ranges as shown in Table 4. The results of a°, $\bar{t}^\circ$, and G_1° together with the corresponding number of storms for each duration and location are summarized in Tables B1 to B13 in Appendix B of this volume. Sample detailed

results are presented in Vol. 4. Table 4 also shows data of other Δt's that were derived from the 5-minute data. Explanation of these cases will be given in Section C of this chapter.

TABLE 4. Depth and Duration Classification of ARS Rainfall Data Analyzed

Time Interval of Data, Δt (min)	5	15	30	60
Duration (min) analyzed for Δt	10	30	60	120
	15	45	90	180
	20	60	120	240
	25	120	180	300
	30	180	240	
	60	240	300	
	120	300		

Depth ranges analyzed: $D \geq 2D_{mean}$, $2D_{mean} > D \geq D_{mean}$
$D \geq D_{mean}$, $D \geq 0.5D_{mean}$

B. Variations of Nondimensional Hyetograph Parameters

The results of analysis are summarized in Tables A1 - A222 and B1 - B13 in the Appendices of this volume. The values of a° are also plotted in Figs. 8 to 16. For the NWS data, for durations of 3, 4, and 5 hours, a° values are shown in Figs. 9 to 11 only for the depth range $D \geq D_{mean}$. In Figs. 8 to 11, the NWS raingage stations are located at the middle digit of the a° values. In Figs. 12 to 16, the ARS stations are located at the decimal point of a° values. From these results, aided by the detailed results not presented, the variations of the nondimensional hyetograph parameters a°, $\bar{t}^\circ$ and G_1°, can be observed and described as follows:

B-(i) Variation of a° -- As can be observed from Figs. 8 to 11 and Tables A1 - A222, in general a° varies from 0.2 to 0.5 and there is a trend of increasing a° from the Southeast United States to the Northeast. There also appears to be a gradual increase towards the New England region. However, the most rapid changes are in the west coastal and mountain states, for which the changes appear to be associated with orographic influence.

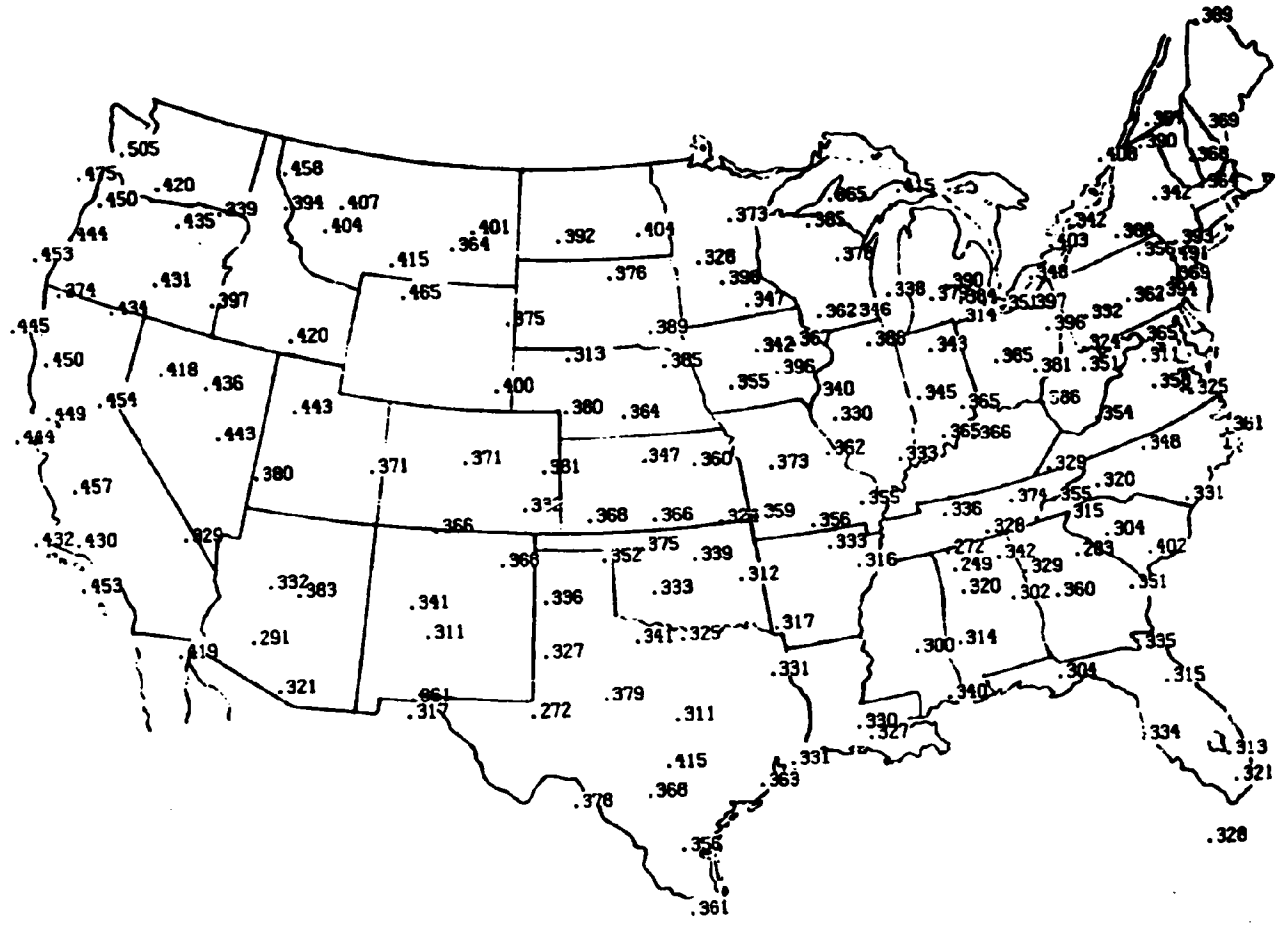

Fig. 8. Values of a° for 2-hour rainstorms from NWS hourly precipitation data
(a) $D \geq 0.5\ D_{mean}$

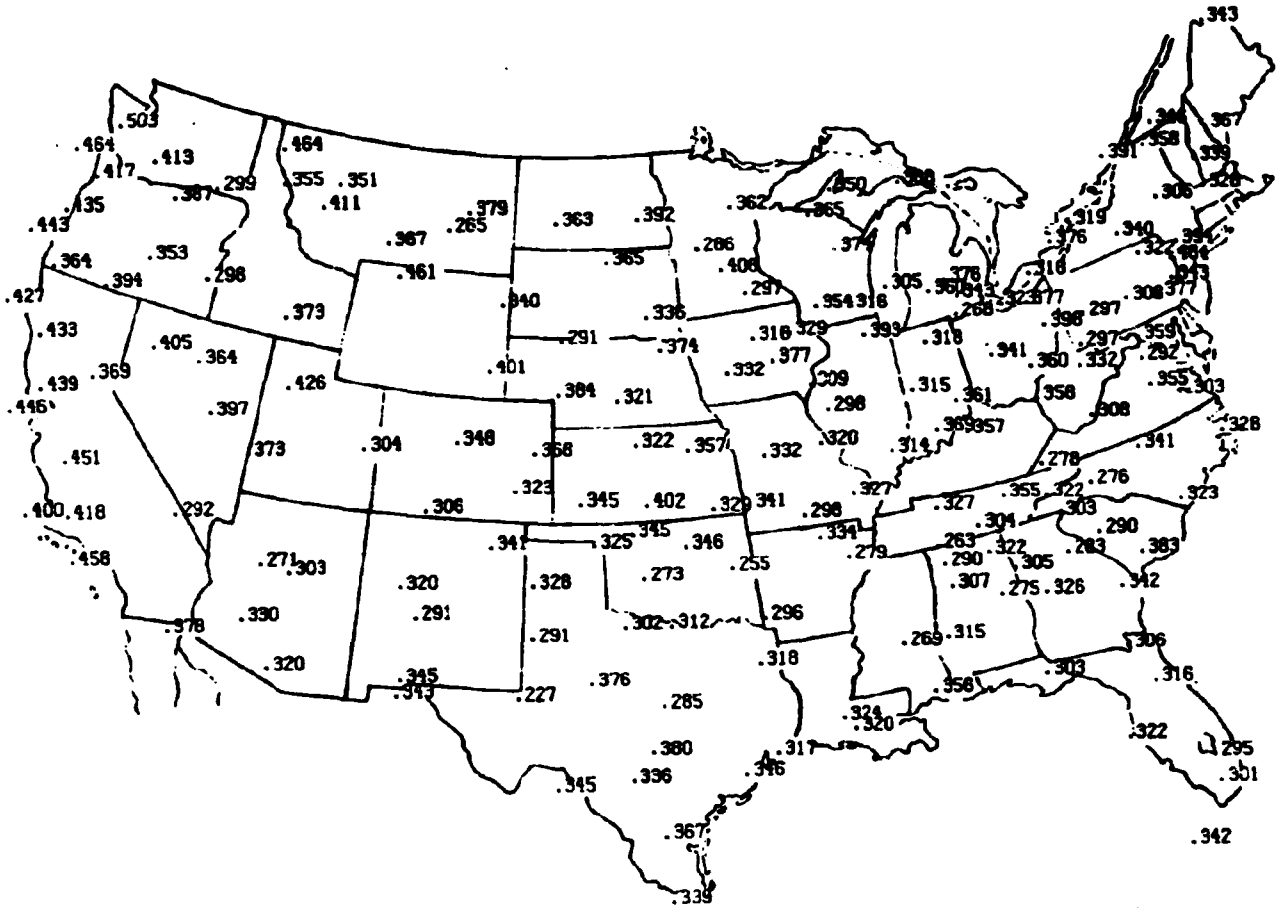

Fig. 8. Values of a° for 2-hour rainstorms from NWS hourly precipitation data (b) $D \geq D_{mean}$

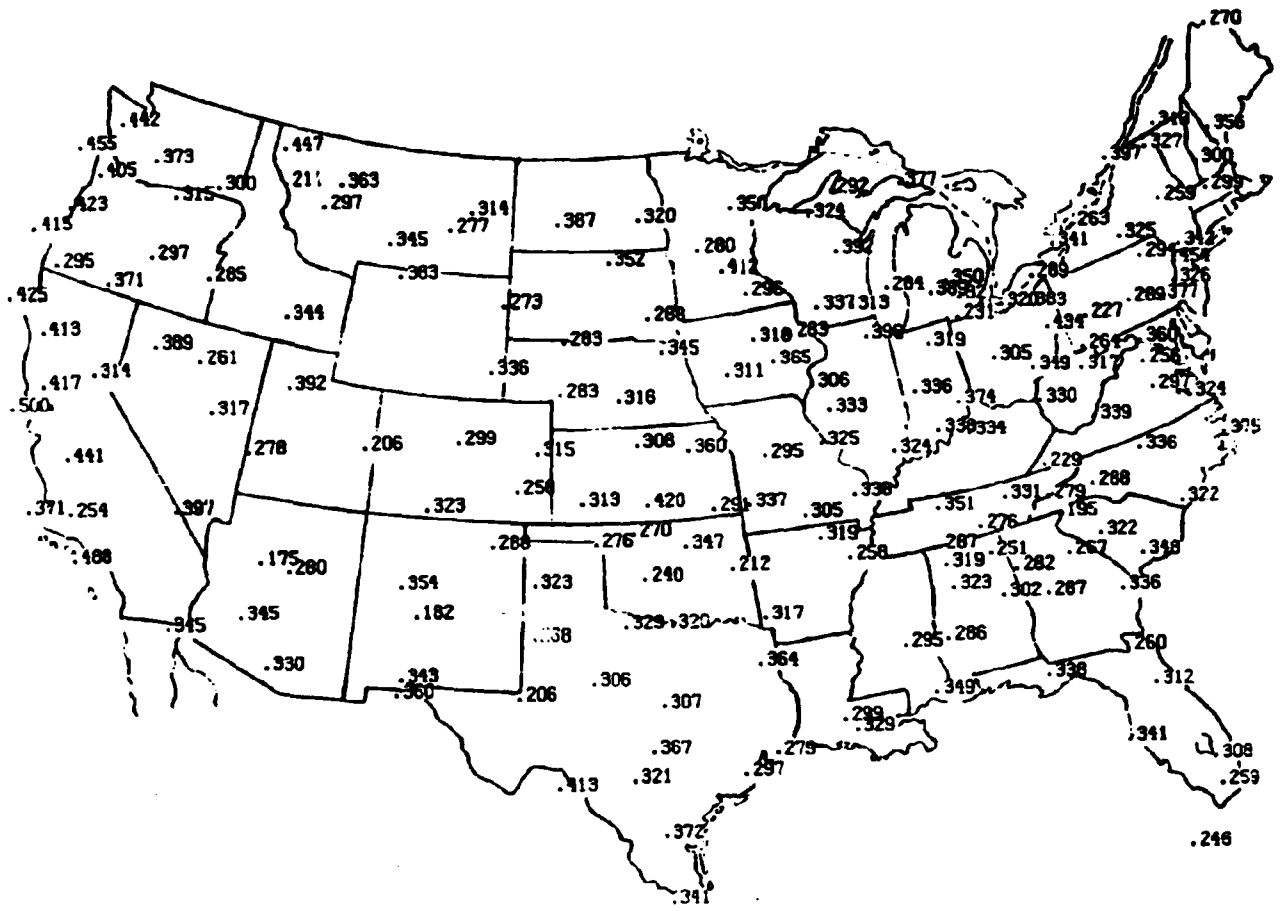

Fig. 8. Values of a° for 2-hour rainstorms from NWS hourly precipitation data (c) $D \geq 2D_{mean}$

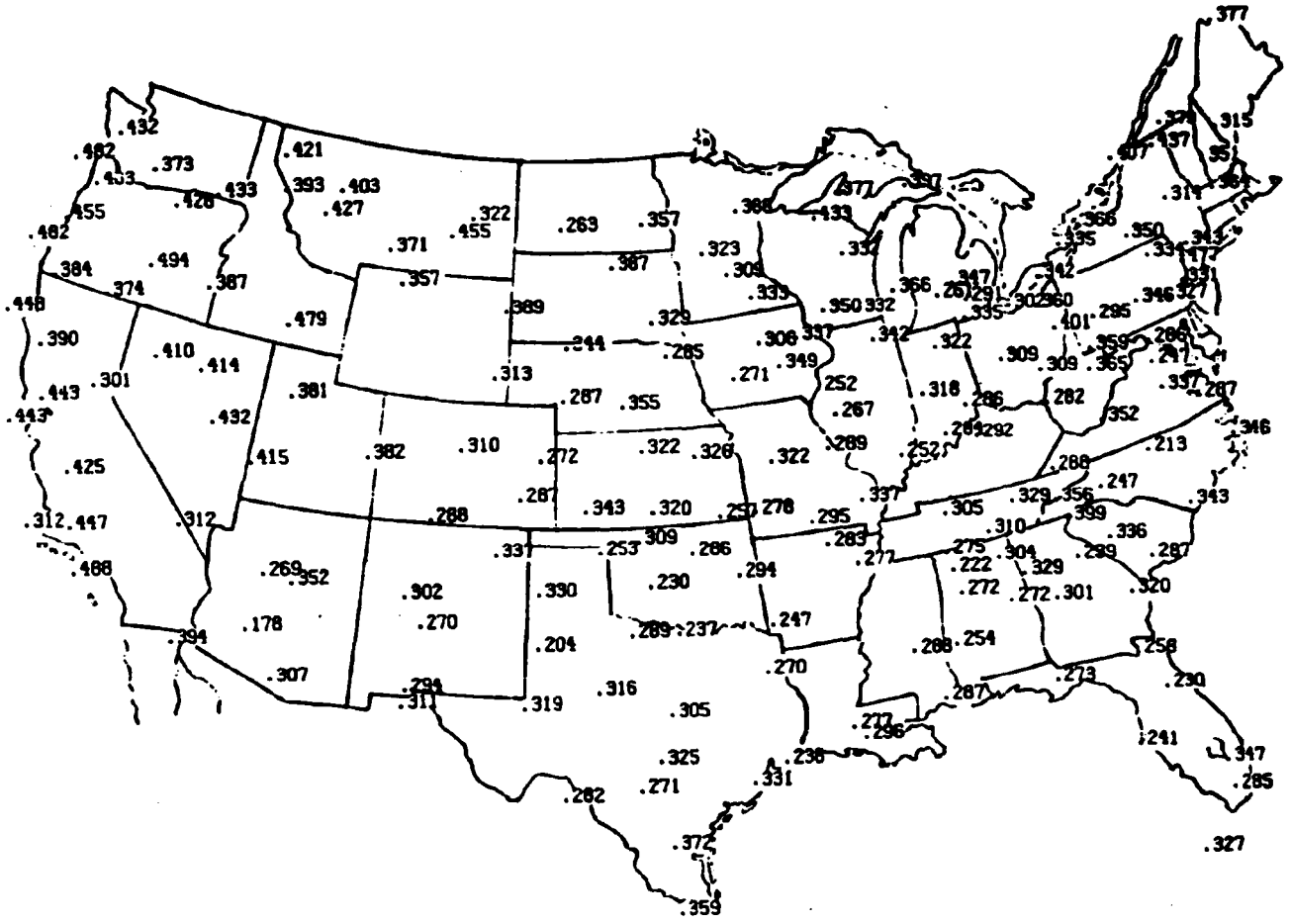

Fig. 9. Values of a° for 3-hour rainstorms from NWS hourly precipitation data

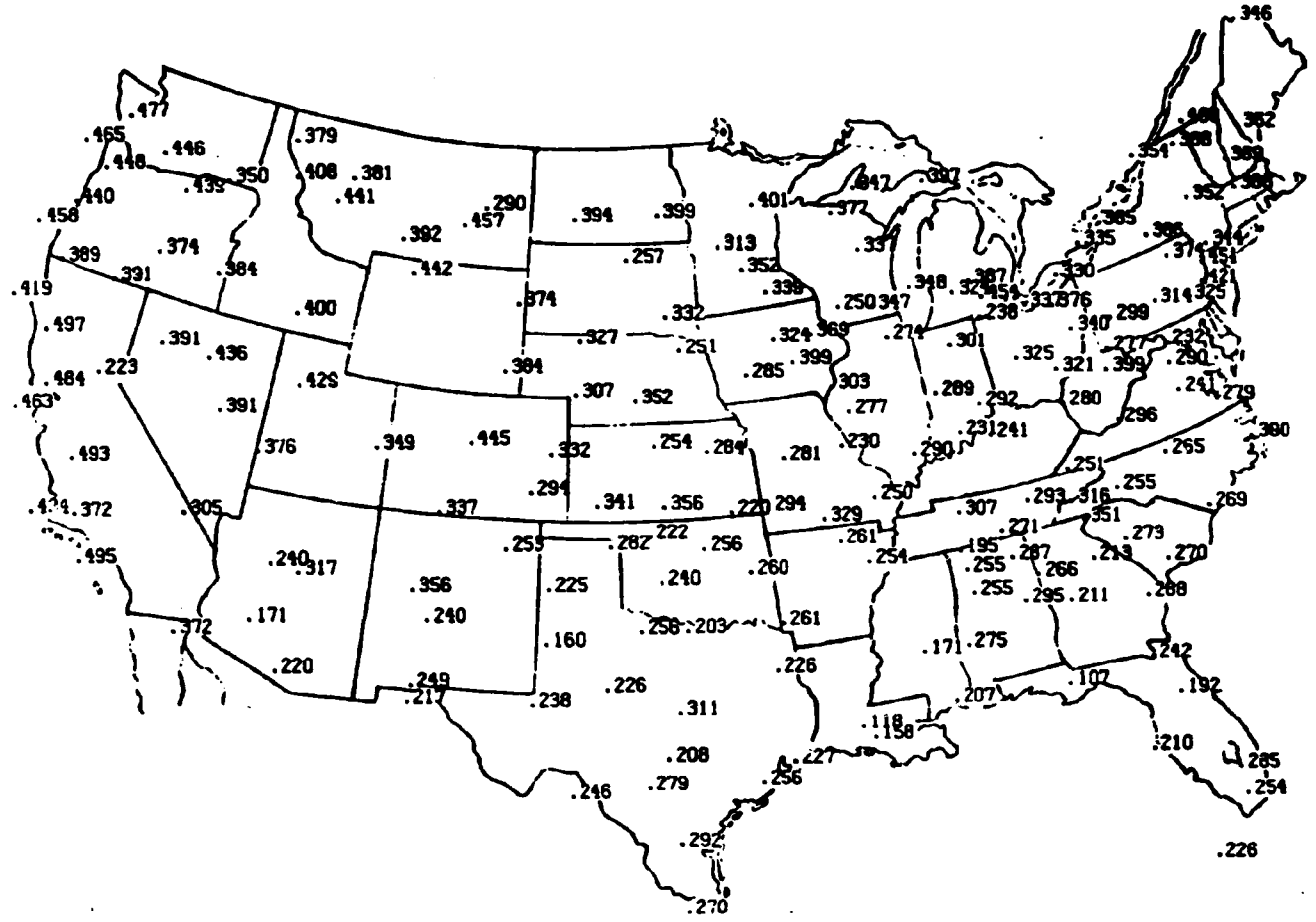

Fig. 10. Values of a° for 4-hour rainstorms from NWS hourly precipitation data

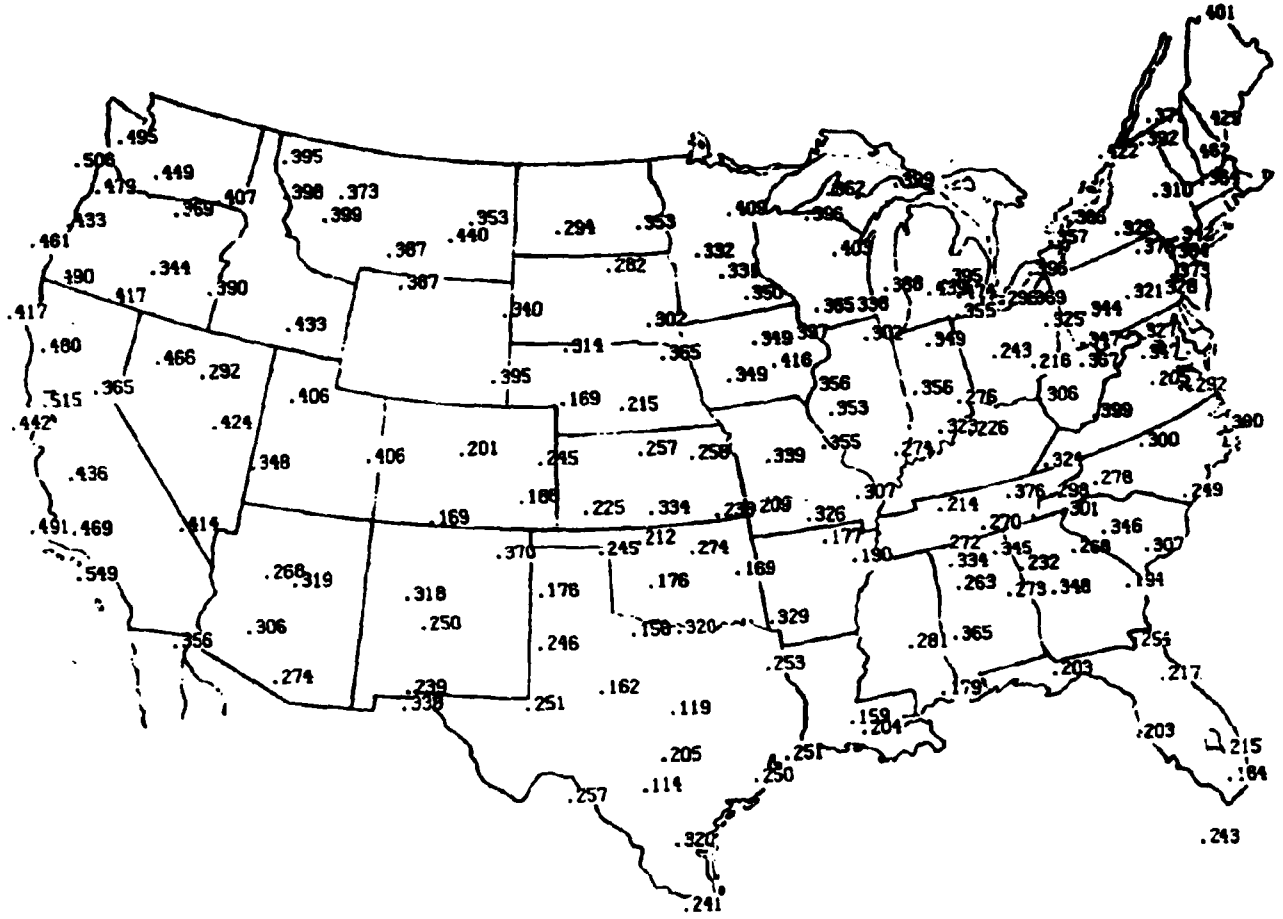

Fig. 11. Values of a° for 5-hour rainstorms from NWS hourly precipitation data

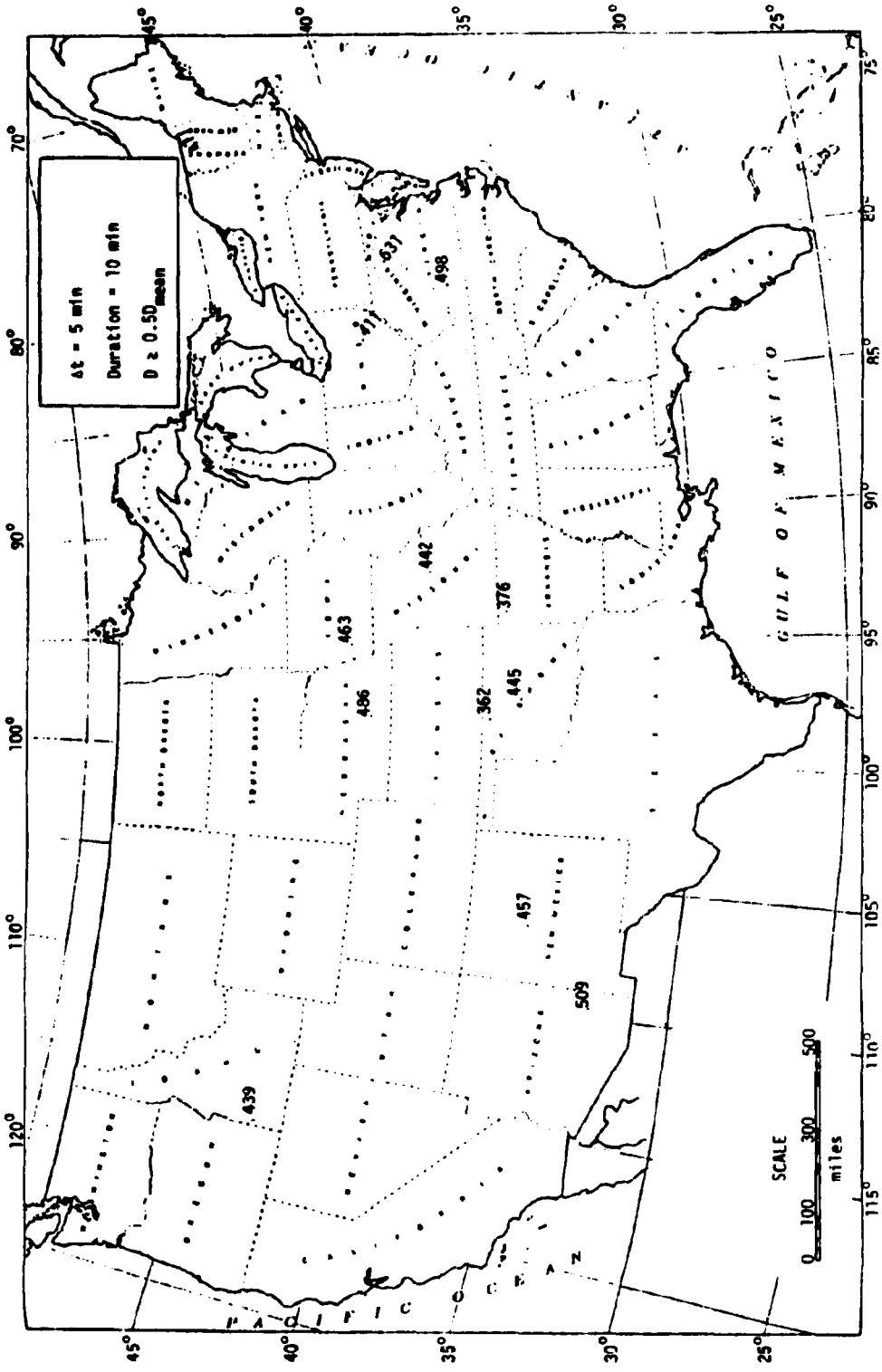

Fig. 12. Values of a^{o} for 10-minute rainstorms from ARS 5-minute data
(a) $D \geq 0.5\ D_{mean}$

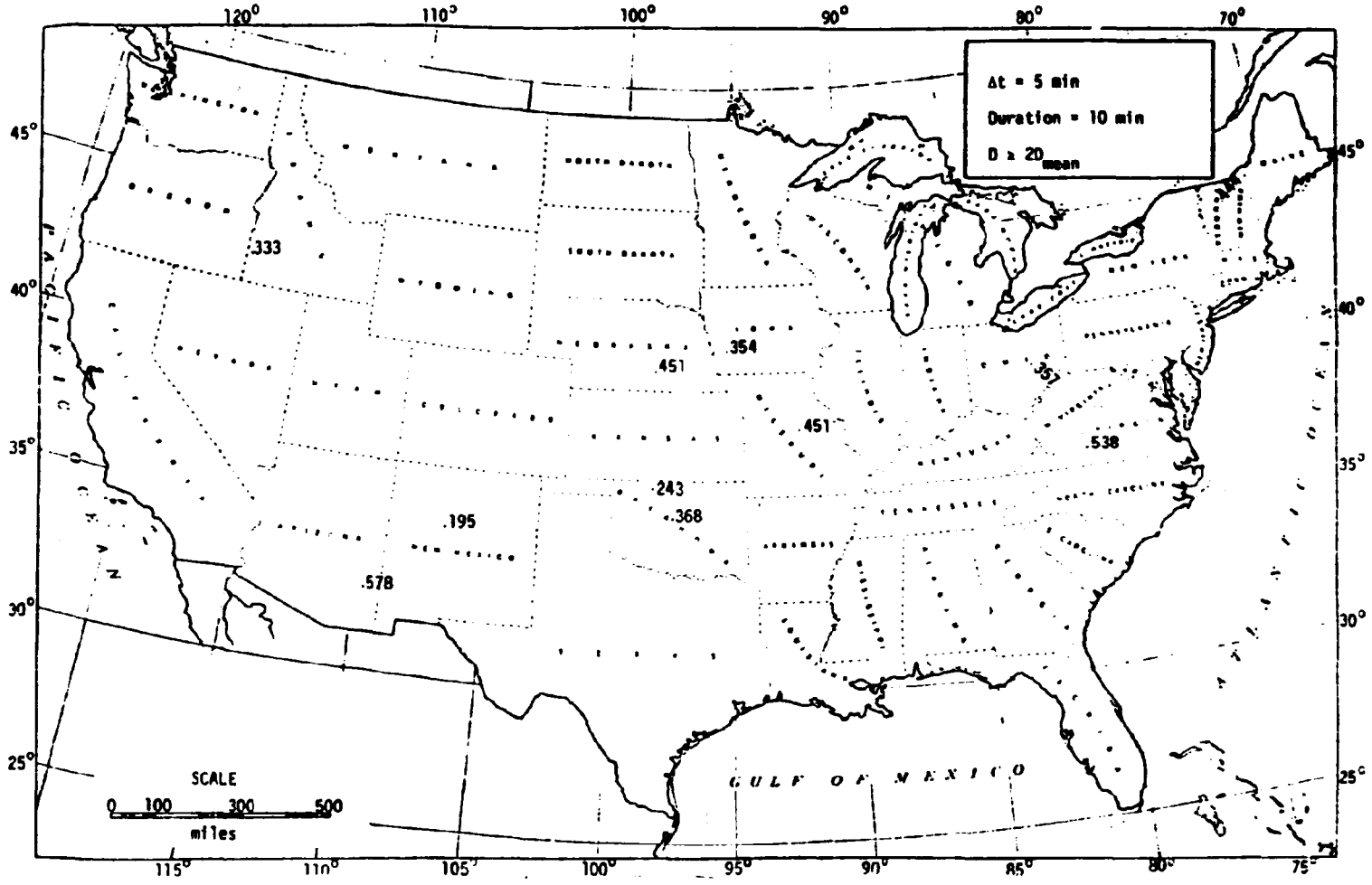

Fig. 12. Values of a° for 10-minute rainstorms from ARS 5-minute data
(b) $D \geq 2\ D_{mean}$

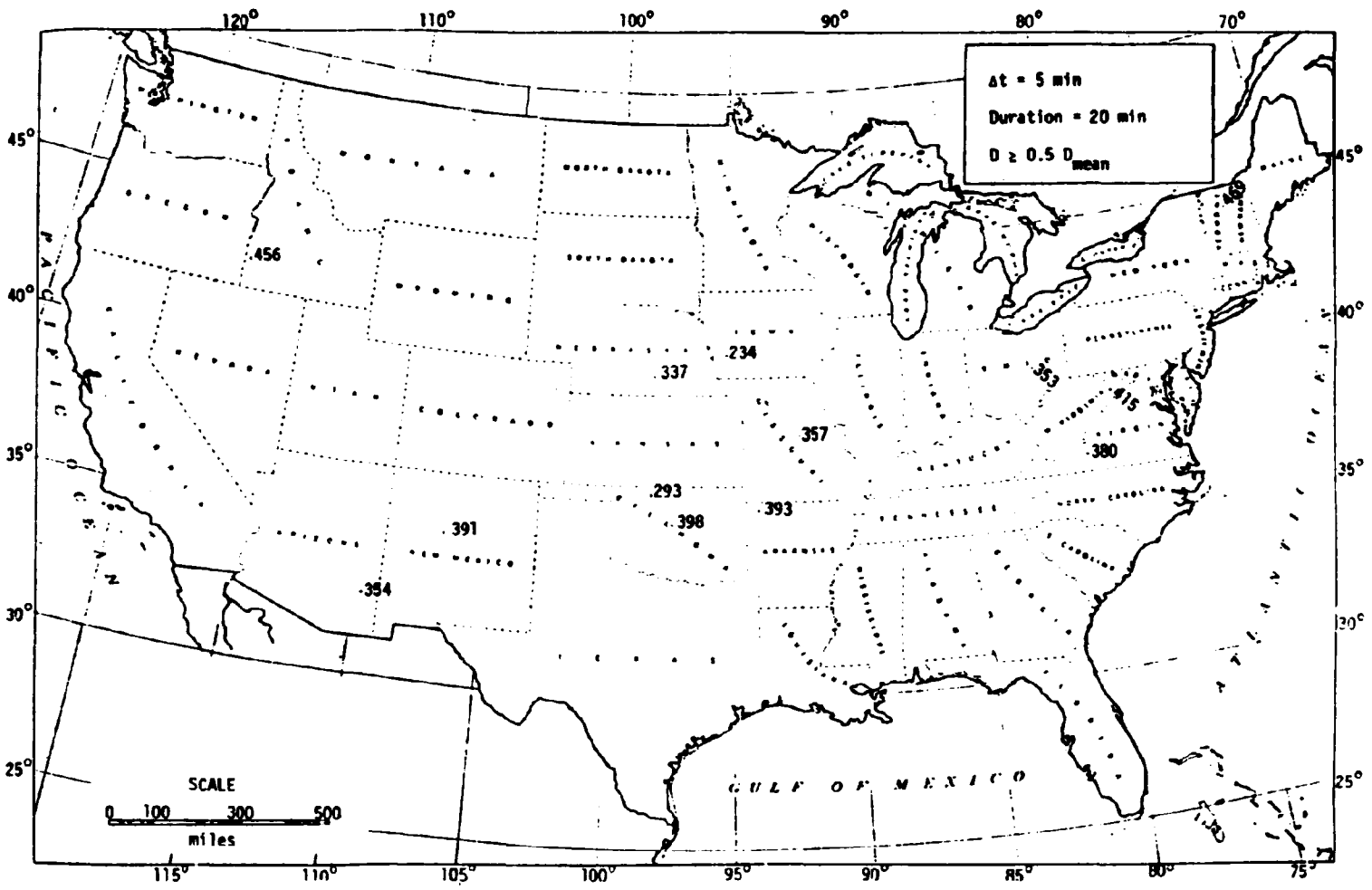

Fig. 13. Values of a° for 20-minute rainstorms from ARS 5-minute data
(a) $D \geq 0.5\ D_{mean}$

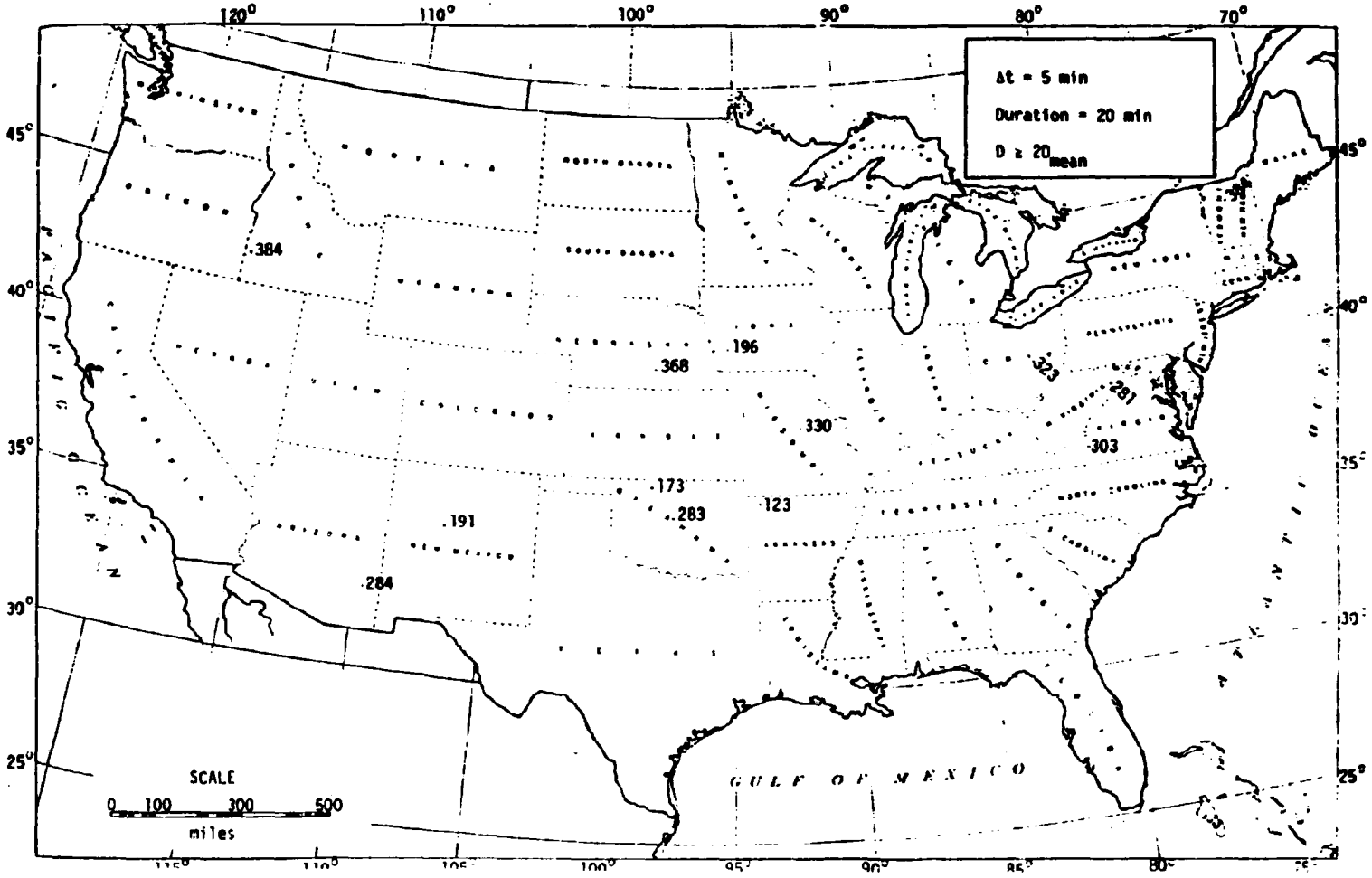

Fig. 13. Values of a^c for 20-minute rainstorms from ARS 5-minute data (b) $D \geq 2\ D_{mean}$ (continued)

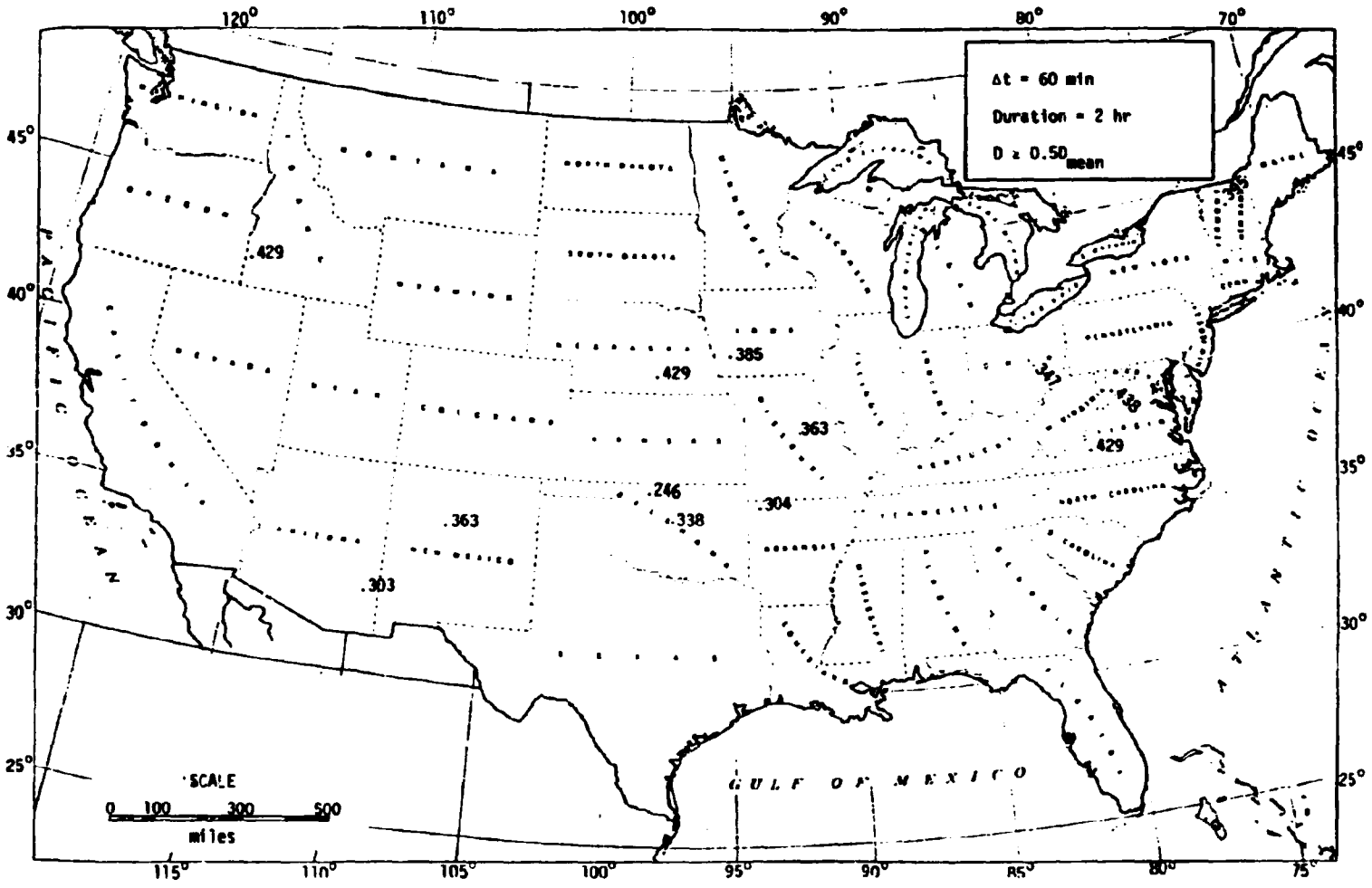

Fig. 14. Values of a^{o} for 2-hour rainstorms from ARS 60-minute data
(a) $D \geq 0.5\ D_{mean}$

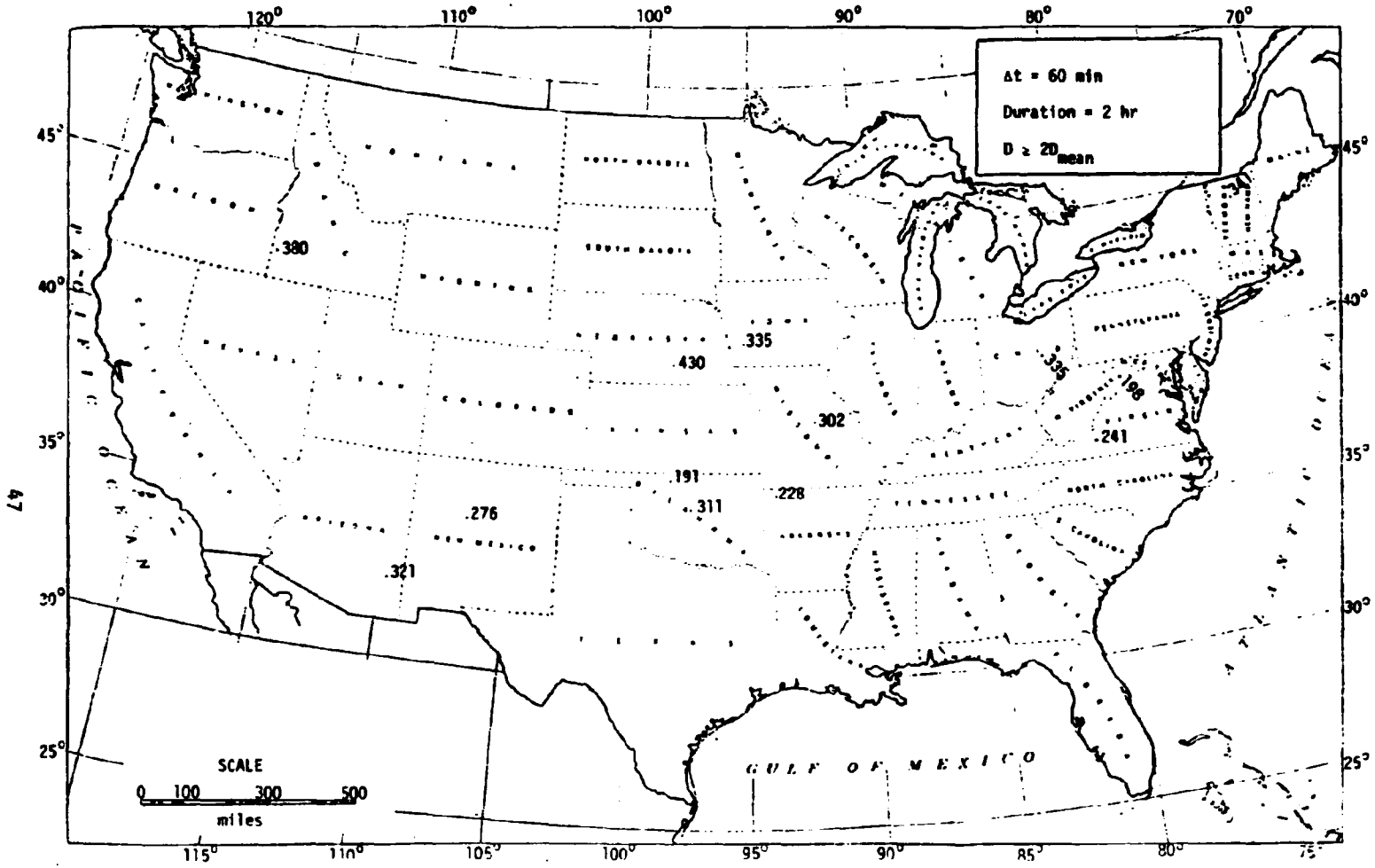

Fig. 14. Values of a° for 2-hour rainstorms from ARS 60-minute data (b) $D \geq 2 D_{mean}$ (continued)

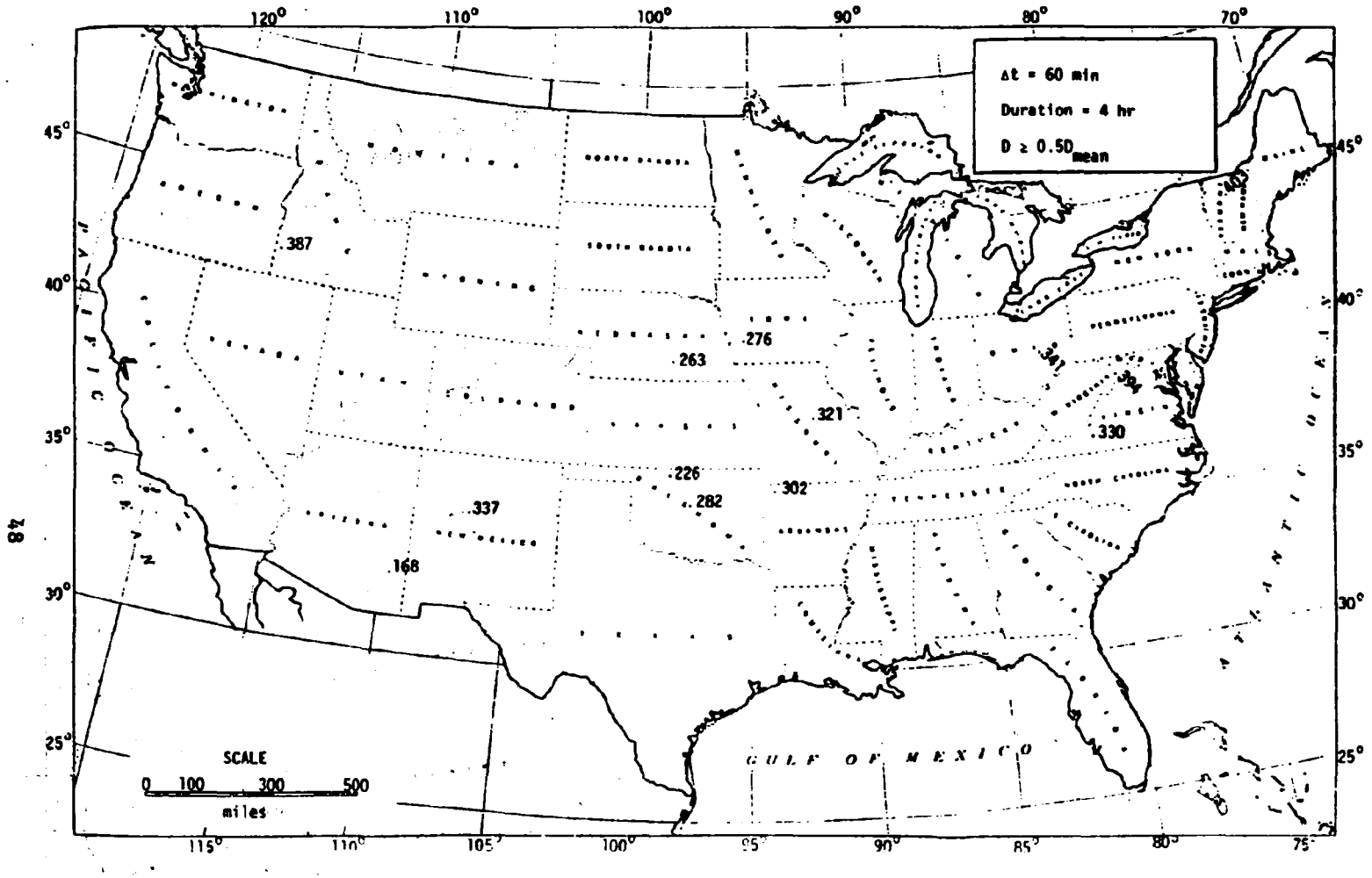

Fig. 15. Values of a° for 4-hour rainstorms from ARS 60-minute data
(a) $D \geq 0.5\ D_{mean}$

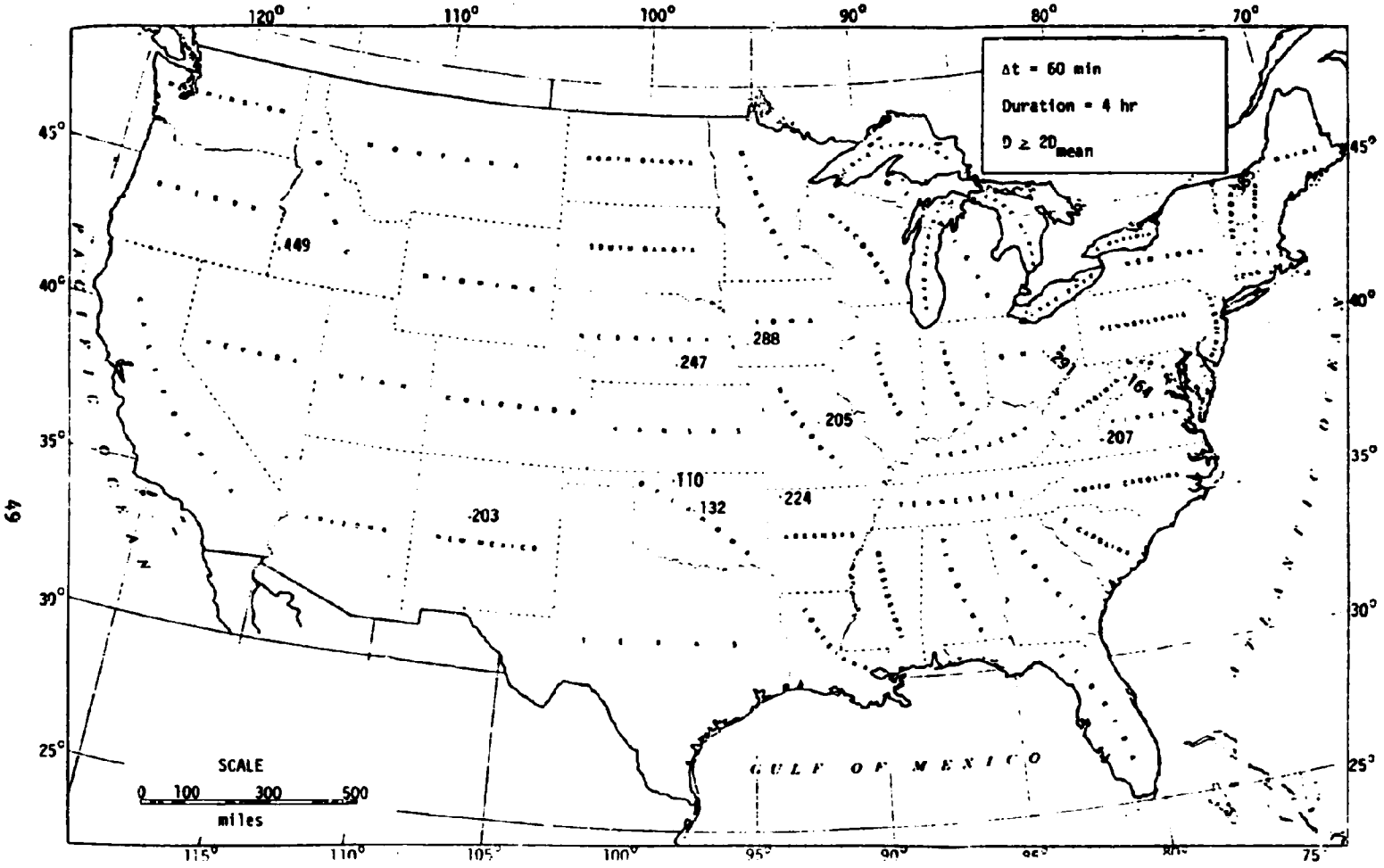

Fig. 15. Values of a^{o} for 4-hour rainstorms from ARS 60-minute data (b) $D \geq 2\,D_{mean}$ (continued)

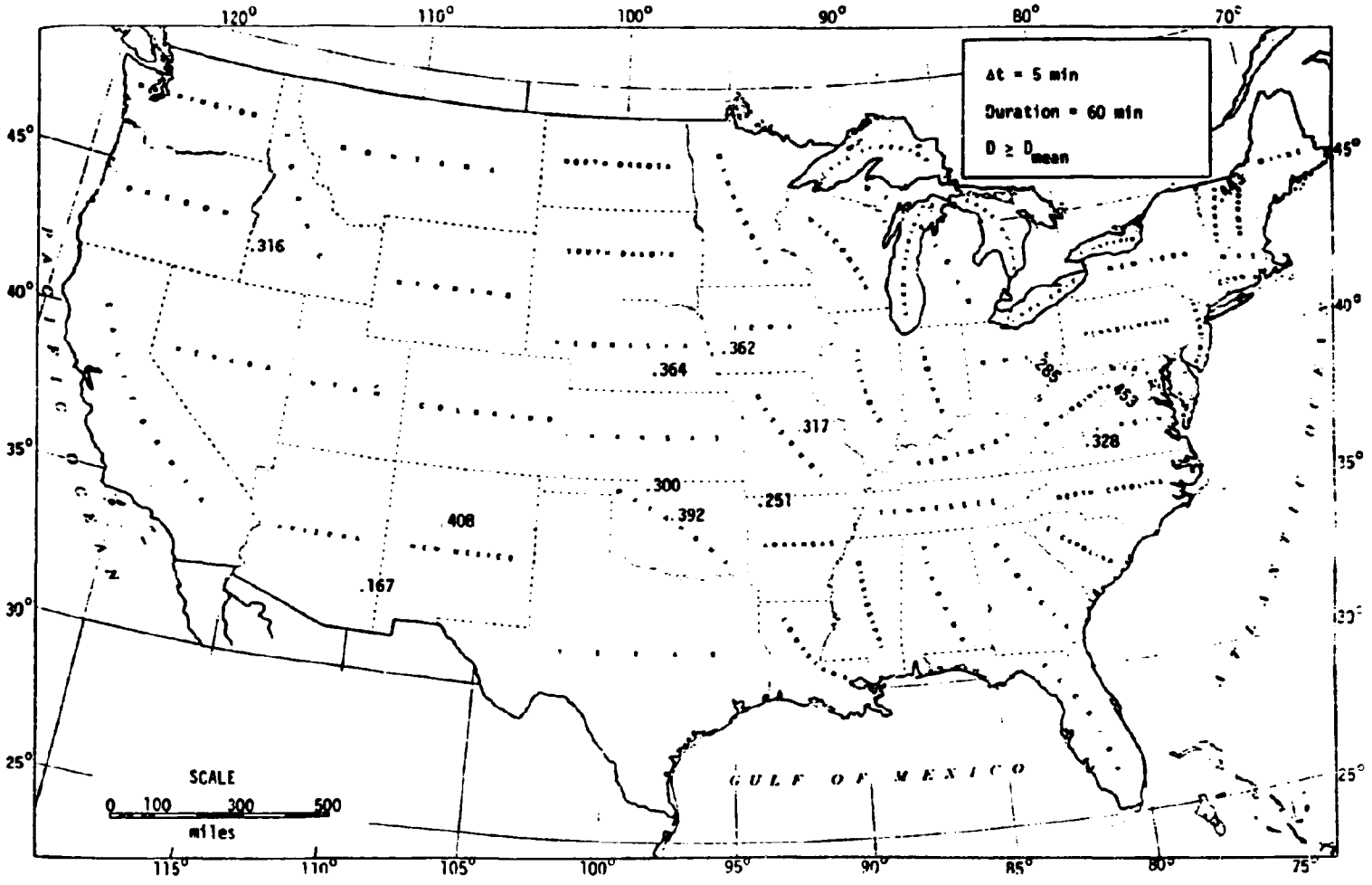

Fig. 16. Values of a° for 1-hour rainstorms from ARS 5-minute data

The results also show that as the depth of rainstorm increases a° decreases. In the average the rainstorms in the top depth quartile have their a° values about 10 to 20 percent smaller than the average a° of all the rainstorms of the same duration. The reason for this variation is obvious. Heavy rainstorms are most likely convective type storms which tend to be heavy at the beginning.

The effect of duration on the variation of a° is less significant in comparing to the effects of location and depth, but far more uncertainty. It appears that the effects due to the nominal duration t_d as compared to the true duration t_d', the data recording time interval Δt as compared to the duration, the clock time vs. real time in data recording, and the definition of rainstorm are collectively more significant than the true duration effect, making a reliable assessment of the duration effect impossible. Suffice with the definition of rainstorm in this study that the effects of geographic locations and depth ranges are more dominant and important than the true effect of duration on a°, and hence for practical purpose at present the effect of duration can be neglected.

B-(ii) Variation of $\bar{t}^\circ$ -- As shown in Tables A1 to A222 and B1 to B13, most of the values of the first time moment arm of the hyetograph, $\bar{t}^\circ$, vary between 0.35 and 0.5 which is a smaller range than that for most of a°, 0.2 to 0.5. Furthermore, $\bar{t}^\circ$ varies in a manner similar to a°, i.e., (1) a general trend of increasing values from the Southeast towards Northwest; (2) relatively more "advanced" rainstorms for heavy storms with large depths than for light storms of small depths; in other words, for heavy rainstorms statistically speaking a large fraction of the rain water fall in an earlier time of the duration than for light rainstorms; (3) the effects of geographic location and rainstorm depth are relatively more significant than the effect of rainstorm duration.

B-(iii) Variation of G_1° -- Most of the G_1° values for the stations analyzed fall within the range of 0.2 to 0.35. No general trend of variation is observed. Despite this small range of variation of G_1°, reliable trapezoidal design hyetographs cannot be established in a systematic manner for the entire United States because of the sensitivity of the peak rainfall intensity of the trapezoidal hyetograph to the combined effect of the values of $\bar{t}^\circ$ and G_1°. However, this does not preclude the possibility of a different two-parameter geometric figure that could be adopted satisfactorily as design storm hyeto-

graphs for larger drainage basins. For this reason the values of G_1^* are presented for those who wish to establish local trapezoidal design hyetograph using the first and second time moments and the equations given in Yen and Chow [1977] or to establish other two-moment geometric figures of hyetographs. The desire of having a trapezoidal or similar hyetograph is for the design of drainage facilities of relatively larger basins (e.g., 50 square miles or 130 km^2) than those suitably served by the triangular design hyetographs. Since these alternatives are beyond the scope of the present study, no further discussion on this aspect is given in this report.

C. Effect of Data Recording Time Interval

The accuracy of the computed time moments of the hyetograph, based on which the triangular and trapezoidal design hyetographs are established, depends on the following factors which are directly or indirectly related to the recording time interval of the data.

- The recording time interval, Δt;
- Whether clock time or real time of Δt is used in recording;
- The definition of rainstorm;
- The true rainstorm duration, t_d'; and
- The rainstorm commencement clock time.

The effect of clock-time recording vs. real-time was discussed in the preceding chapter. Consistent with designers' viewpoint, a rainstorm has been defined in this report as continuous non-zero depths in successive Δt's. Thus, the rainstorm so defined and the last two factors listed above are all dependent on the data recording time interval, Δt. Therefore, a study of the effect of Δt is most desirable. The 5-minute clock-time data generated from the ARS break-point data for 13 stations were used in an attempt to investigate the effect of Δt. Rainstorm data having the recording time interval Δt = 15, 30, and 60 minutes were generated from the 5-minute clock-time data as shown in Table 5. These data of different Δt's are screened to identify the rainstorms according to the storm definition, and then sorted according to the duration and depth, subsequently subject to the same kind of class statistics analysis as for the 5-minute and NWS hourly data. The results are summarized in Tables B1 to B13 for comparison. It can be seen that the variation of a^* due to Δt is rather random and no obvious trend can

TABLE 5. Rainstorm Data Generated from SEA-AR 5-Minute Clock Time Data

Station \ Δt, min	5	15	30	60
Bentenville, AR	51	60	81	88
Safford, AZ	256	241	248	221
Reynolds, ID	131	207	244	226
Treynor, IA	173	241	271	261
McCreddie, MO	568	673	838	800
Hastings, NE	199	251	314	320
Albuquerque, NM	271	293	299	261
Coshocton, OH	974	982	1056	893
Cherokee, OK	294	309	367	360
Guthrie, OK	543	375	338	290
Danville, VT	424	542	613	513
Blacksburg, VA	202	289	416	359
Moorefield, WV	134	200	256	246
Total No. of Storms	4220	4663	5341	4838

be detected, except that when Δt is small the durations of the rainstorm should not be too short to avoid incorrect results. For example, for Δt = 5 minutes, "rainstorms" having $t_d \leq 15$ minutes give a drop in a° values, indicating in fact such short duration "storms" may not be truly and completely independent of each other. They may be rain bursts coming from different rain cells of the same cloud.

Conversely, the ratio $t_d/\Delta t$ appears to affect the computed values of a° if the value of the ratio is small. Rainstorms having $t_d/\Delta t$ equal to 2 or 3 tend to have higher values of a° and asymptotic to a constant as t_d increases. For example, the value of a° for a 2-hour rainstorm from a one-hour Δt data is higher than that of a 2-hour rainstorm from a 5 or 15 minute Δt data. Contrarily, as shown in Figs. 13 and 15 for which $t_d/\Delta t = 4$ the values of a° at a given station appear to be similar, although the values of Δt and t_d are different in the two figures.

In order to assess individually and collectively the effects of the five factors related to Δt mentioned at the beginning of this section, an accurate and continuous data of a long period containing a sufficiently large number of rainstorms is a prerequisite. Although long period continuous data do exist in the form of original weighing gage recording charts, data in such format are impractical for analysis because they are not digitized and hence unsuitable for computer manipulation. To investigate reliably the direct and indirect effects of Δt, the basic digitized data should have a recording time of one minute or half a minute. Such a short recording time interval reaches the resolution limit of the original data recording chart of 6 hours per revolution and exceeds what one can obtain from a 24-hour or longer recording charts. Analysis of such a large amount of data without using a computer is impractical. Conversely, digitizing of such data in a fine resolution is a monumentary job that has not been undertaken by anyone, and it is far beyond the resource of the present investigation. Nevertheless, cross examination of the results of the present study indicates that statiscally the collective effect of the Δt and rainstorm-definition-related factors is only secondary and hence can be neglected at this stage, provided the rainstorm duration exceeds 15 minutes and $t_d/\Delta t$ exceeds 2.

D. National Map of a°

Usually the local design storm for highway drainage facilities is a heavy rainstorm. With reference to the values of a° presented in Figs. 8 to 16 and in Appendices and based on the nature of heavy rainstorms discussed previously, a national map of a° is developed as shown in Fig. 17 to be used for design of small drainage facilities. The map is applicable for heavy rainstorms with depth $D > 2D_{mean}$ where D_{mean} is the statistical mean value of the depths of all the rainstorms of the same duration. However, in practice the true value of D_{mean} is unknown and its estimate is difficult because of the large quantity of data required. Therefore, an alternate, approximate depth must be developed to replace D_{mean} as a practical limitation of the validity of the map. Based on a statistical analysis of the available data, the rain depth range that Fig. 17 is applicable is

$$D \geq 0.12\ (t_d + 0.5)\ D_r \qquad (5.1)$$

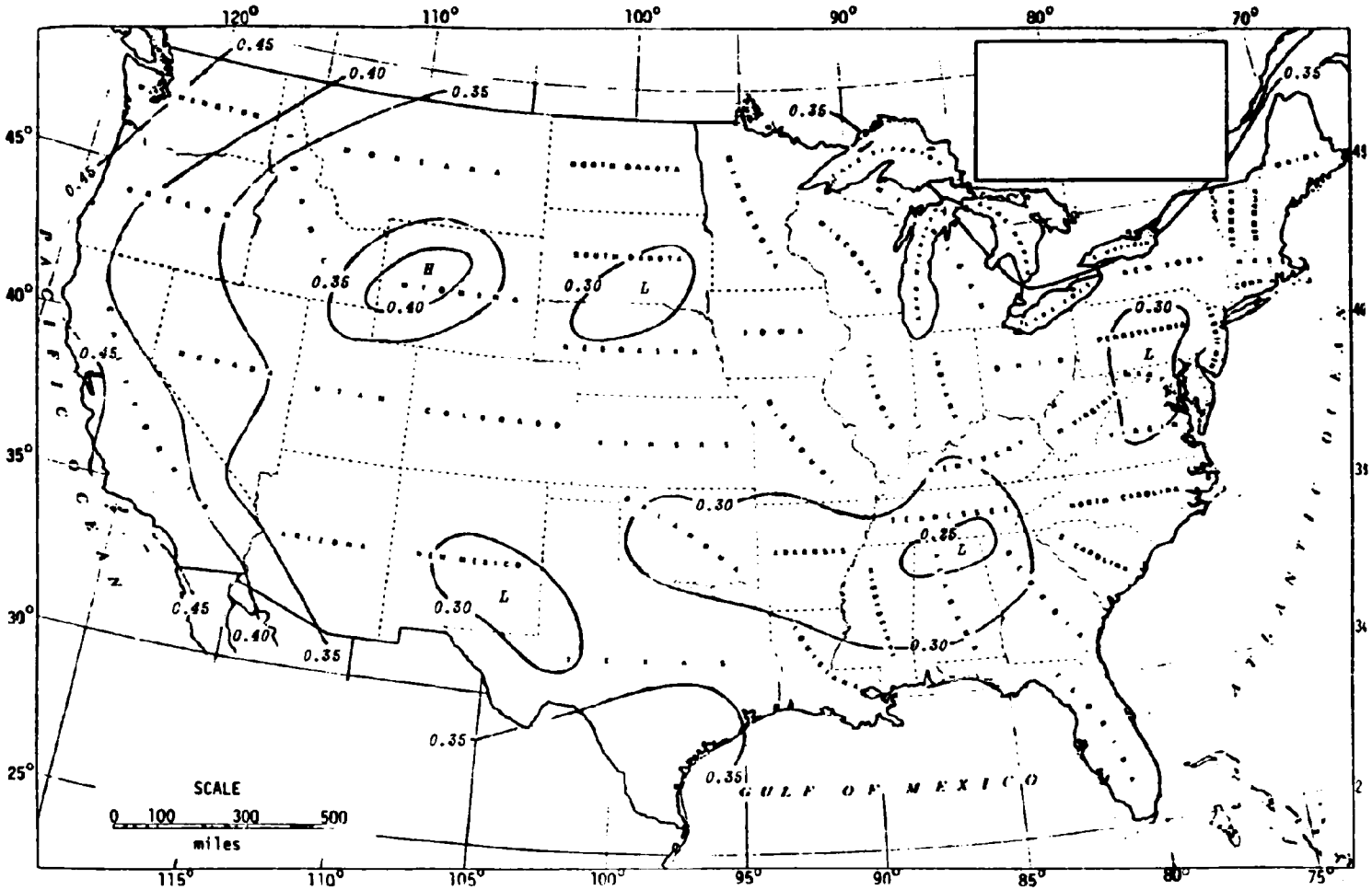

Fig. 17. National map of a°

in which t_d is the duration of the rainstorm in hours, and D_r is a reference depth corresponding to the rainstorm having a return period of two-years and duration of one hour. One should be aware that the a° values given in the map are the expected value of heavy rainstorms. Since there is a probability distribution of a°, there is 50% chance that a heavy rainstorm of the design return period, duration, and depth would have the corresponding value of a° smaller than that given in the map.

Occasionally rainstorms of relatively small depths may also be considered in design and analysis of drainage facilities. For example, when storm runoff pollution or storage control are under consideration for which light but frequent rainstorms also contribute. Many factors affect the values of a° of light rainstorms. Nevertheless, for practical purpose the value of a° of a light rainstorm can be computed as that given in Fig. 17 multiplied by an adjustment factor α where

$$\alpha = 1.3 - \frac{2.5}{t_d + 0.5} \frac{D}{D_r}$$

$$\text{for } 0.12\ (t_d + 0.5)\ D_r > D > 0 \qquad (5.2)$$

in which t_d and D_r are as defined previously. It should be noted that the appearance of t_d in Eq. 5.2 for α does not imply a significant role of t_d. Its appearance is primarily the result of chosing the two-year one-hour rainfall as the reference depths, D_r, to replace D_{mean}.

VI. CONCLUSIONS AND RECOMMENDATIONS

The triangular hyetograph method for design of drainage facilities for small watersheds is developed on the basis of the method of moments. In the development of the method, considerations were given to both simplicity in practical applications and preservation of the most important (first order) characteristic of the time distribution of rainfall, namely, the statistical mean of the first time moment arm of the hyetographs. Instead of giving only a constant design rainfall intensity over the design rainfall duration as commonly obtained from the intensity-duration-frequency analysis, the new method gives the time distribution of the rainfall, i.e., the design hyetograph.

Since rainstorms have different temporal and areal distributions of rainfall, the temporal distribution of the rainfall of a future storm cannot be predicted exactly. Thus, the design storm hyetographs can only be estimated statistically. Based on the results of statistical analyses of 293,946 rainstorms and the triangular hyetograph method, a national map of the key nondimensional parameter, peaking time a°, of the design triangular hyetograph is developed and given in Fig. 17. The rainstorms analyzed were selected from more than one million rainstorms of 222 stations in the National Weather Service hourly precipitation data file and 13 stations in the USDA ARS experimental watersheds precipitation break-point data file. The rainfall data in the 16 April to 15 October "season" for each station are classified according to the rainfall duration and depth groups for the statistical analysis.

The results of the statistical analysis indicate that there is a general trend of increasing a° and the nondimensional first time moment arm, $\bar{t}^\circ$, from the Southeast United States towards the Northwest, and in a less degree towards the New England region as shown in Fig. 17. In most cases the values of a° fall within the range between 0.2 and 0.5 while $\bar{t}^\circ$ within the range between 0.35 and 0.5. Except for the contiguous United States west of the Rocky Mountains, New England, and for other areas with significant orographic effects, the values of a° and $\bar{t}^\circ$ vary within rather small ranges.

The results of analysis confirm that heavy rainstorms of large rain depths, presumably mostly convective type rainstorms, tend to have small a°, i.e., "advanced" storms with early peak. Conversely, light rainstorms of small

depths, presumably more of the cyclonic-frontal type, tend to have somewhat later peak and higher a°. This variation of a° with depth can be accounted for by using the adjustment factor given in Eq. 5.2.

The effects of rainfall duration on a° and $\bar{t}^\circ$ are only secondary in comparison to the effects of geography and rain depth. However, the effect of duration cannot be precisely assessed because the unknown true duration is not necessary the same as the nominal duration obtained from the data.

With the national map of a° available, the use of the triangular hyetograph as the design storm for local drainage facility is rather simple. The procedure of application is given in Vol. III of this report set. This procedure is recommended for design of highway storm drainage facilities for watersheds no more than 20 square miles (50 km^2) in size. For larger watersheds use of the trapezoidal hyetograph should be considered.

With the analysis of a large number of rainstorms at 235 locations in the United States, the feasibility and practicality of the method of triangular hyetograph has been confirmed. However, the method can clearly be improved with experience of applications and improved data. For example, a more thorough study of the effects of the data recording time interval, Δt, is desirable when reliable long period, short recording time interval data become available as discussed in Section V-C. Refinement of the values of a° in the national map (Fig. 17) and its variation with rain depth (Eq. 5.2) and other details would also improve the triangular design hyetograph method. To extend the applicability of the design hyetograph to larger watersheds, extension of the method of moment to trapezoidal hyetographs using one or two moments is desirable. Also, in view of risk analysis, the design hyetograph need not be based on the expected (50%) value of a°. Instead, a probability distribution of a° would allow selection of probabilistic design hyetographs. Furthermore, refinement in the definition of a rainstorm and its effects on the triangular hyetograph should also be pursued.

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APPENDIX A. Summary of Results of NWS Hourly Data

TABLE A1. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BIRMINGHAM AP AL (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.374	.350	.307	.336
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.320	.306	.253	.302
A OF NONDIM. HYETOGRAPH	D >= MEAN	.307	.272	.255	.263
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.323	.240	.266	.246
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.450	.435	.419	.431
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.426	.413	.392	.415
NONDIM. 1ST TIME MOMENT	D >= MEAN	.419	.398	.388	.397
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.426	.383	.397	.383
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.233	.259	.244	.252
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.259	.235	.218	.230
NONDIM. 2ND TIME MOMENT	D >= MEAN	.253	.217	.212	.214
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.260	.201	.221	.196
NUMBER OF RAINSTORMS	ALL RAINSTORMS	720.	319.	184.	94.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	369.	176.	118.	56.
NUMBER OF RAINSTORMS	D >= MEAN	228.	98.	68.	38.
NUMBER OF RAINSTORMS	D >= 2 MEAN	99.	45.	19.	12.

TABLE A2. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION GUNTERSVILLE AL (1962-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.307	.329	.312	.349
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.249	.251	.254	.302
A OF NONDIM. HYETOGRAPH	D >= MEAN	.290	.222	.255	.334
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.319	.249	.112	.419
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.424	.427	.416	.441
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.398	.394	.386	.420
NONDIM. 1ST TIME MOMENT	D >= MEAN	.414	.376	.373	.426
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.420	.384	.292	.471
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.258	.260	.241	.272
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.232	.228	.215	.254
NONDIM. 2ND TIME MOMENT	D >= MEAN	.247	.208	.206	.264
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.253	.215	.135	.297
NUMBER OF RAINSTORMS	ALL RAINSTORMS	293.	145.	85.	45.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	155.	92.	49.	26.
NUMBER OF RAINSTORMS	D >= MEAN	99.	49.	30.	18.
NUMBER OF RAINSTORMS	D >= 2 MEAN	40.	19.	10.	4.

TABLE A3. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION HUNTSVILLE AP AL (1959-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.382	.333	.343	.354
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.314	.280	.265	.296
A OF NONDIM. HYETOGRAPH	D >= MEAN	.315	.254	.275	.365
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.286	.267	.141	.409
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.454	.434	.435	.445
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.423	.410	.404	.421
NONDIM. 1ST TIME MOMENT	D >= MEAN	.420	.397	.405	.447
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.406	.397	.334	.470
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.287	.257	.257	.267
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.257	.233	.223	.245
NONDIM. 2ND TIME MOMENT	D >= MEAN	.254	.219	.221	.261
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.240	.223	.160	.262
NUMBER OF RAINSTORMS	ALL RAINSTORMS	486.	199.	125.	66.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	239.	126.	83.	39.
NUMBER OF RAINSTORMS	D >= MEAN	150.	78.	49.	23.
NUMBER OF RAINSTORMS	D >= 2 MEAN	75.	25.	12.	7.

TABLE A4. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MOBILE AP AL (1958-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.381	.355	.312	.286
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.340	.315	.233	.209
A OF NONDIM. HYETOGRAPH	D >= MEAN	.356	.287	.207	.173
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.349	.304	.306	.131
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.454	.436	.421	.408
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.434	.412	.386	.372
NONDIM. 1ST TIME MOMENT	D >= MEAN	.440	.398	.368	.345
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.436	.397	.408	.347
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.287	.262	.244	.237
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.268	.235	.212	.205
NONDIM. 2ND TIME MOMENT	D >= MEAN	.273	.218	.194	.175
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.269	.221	.226	.159
NUMBER OF RAINSTORMS	ALL RAINSTORMS	624.	283.	125.	76.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	295.	152.	73.	51.
NUMBER OF RAINSTORMS	D >= MEAN	185.	93.	46.	31.
NUMBER OF RAINSTORMS	D >= 2 MEAN	92.	36.	20.	7.

TABLE A5. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MONTGOMERY AP AL (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.392	.369	.289	.312
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.363	.340	.202	.263
A OF NONDIM. HYETOGRAPH	D >= MEAN	.341	.313	.160	.234
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.364	.339	.145	.300
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.457	.442	.412	.415
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.442	.425	.375	.389
NONDIM. 1ST TIME MOMENT	D >= MEAN	.433	.414	.347	.371
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.439	.429	.334	.420
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.290	.266	.235	.236
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.276	.246	.197	.210
NONDIM. 2ND TIME MOMENT	D >= MEAN	.266	.234	.173	.192
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.273	.247	.156	.211
NUMBER OF RAINSTORMS	ALL RAINSTORMS	555.	245.	147.	88.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	278.	142.	86.	58.
NUMBER OF RAINSTORMS	D >= MEAN	178.	77.	49.	32.
NUMBER OF RAINSTORMS	D >= 2 MEAN	89.	39.	20.	8.

TABLE A6. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PAINT ROCK AL (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.331	.335	.309	.301
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.282	.305	.262	.258
A OF NONDIM. HYETOGRAPH	D >= MEAN	.250	.286	.253	.183
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.234	.220	.215	.156
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.434	.427	.419	.418
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.412	.406	.397	.397
NONDIM. 1ST TIME MOMENT	D >= MEAN	.397	.392	.398	.358
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.391	.357	.384	.330
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.268	.256	.246	.240
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.245	.232	.224	.217
NONDIM. 2ND TIME MOMENT	D >= MEAN	.230	.220	.218	.185
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.224	.186	.207	.164
NUMBER OF RAINSTORMS	ALL RAINSTORMS	590.	304.	149.	101.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	319.	162.	100.	66.
NUMBER OF RAINSTORMS	D >= MEAN	201.	103.	51.	34.
NUMBER OF RAINSTORMS	D >= 2 MEAN	77.	47.	16.	12.

TABLE A7. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION TONEY AL (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.324	.320	.262	.306
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.272	.287	.217	.299
A OF NONDIM. HYETOGRAPH	D >= MEAN	.263	.275	.195	.272
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.287	.242	.170	.113
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.432	.422	.388	.418
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.407	.403	.360	.411
NONDIM. 1ST TIME MOMENT	D >= MEAN	.401	.394	.351	.397
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.412	.374	.337	.337
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.265	.251	.221	.246
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.241	.232	.192	.237
NONDIM. 2ND TIME MOMENT	D >= MEAN	.234	.223	.183	.224
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.245	.202	.168	.166
NUMBER OF RAINSTORMS	ALL RAINSTORMS	532.	291.	136.	93.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	272.	178.	79.	62.
NUMBER OF RAINSTORMS	D >= MEAN	175.	97.	51.	39.
NUMBER OF RAINSTORMS	D >= 2 MEAN	79.	33.	12.	9.

TABLE A8. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION FLAGSTAFF AP AZ (1950-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.398	.373	.367	.386
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.332	.322	.300	.348
A OF NONDIM. HYETOGRAPH	D >= MEAN	.271	.269	.240	.268
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.175	.208	.150	0.000
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.461	.447	.448	.451
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.434	.422	.421	.436
NONDIM. 1ST TIME MOMENT	D >= MEAN	.407	.406	.400	.392
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.364	.374	.375	.254
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.294	.272	.271	.277
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.267	.246	.243	.263
NONDIM. 2ND TIME MOMENT	D >= MEAN	.241	.229	.222	.226
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.197	.207	.190	.104
NUMBER OF RAINSTORMS	ALL RAINSTORMS	452.	178.	96.	44.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	230.	105.	54.	37.
NUMBER OF RAINSTORMS	D >= MEAN	130.	59.	29.	16.
NUMBER OF RAINSTORMS	D >= 2 MEAN	54.	21.	12.	4.

TABLE A9. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PHOENIX AP AZ (1954-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.357	.276	.194	.378
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.291	.258	.165	.320
A OF NONDIM. HYETOGRAPH	D >= MEAN	.330	.178	.171	.306
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.345	.208	.197	.324
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.446	.408	.368	.447
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.419	.394	.347	.429
NONDIM. 1ST TIME MOMENT	D >= MEAN	.427	.356	.337	.403
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.429	.362	.349	.441
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.279	.227	.200	.268
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.252	.212	.179	.246
NONDIM. 2ND TIME MOMENT	D >= MEAN	.260	.179	.172	.231
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.262	.179	.175	.245
NUMBER OF RAINSTORMS	ALL RAINSTORMS	111.	45.	35.	12.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	57.	29.	22.	10.
NUMBER OF RAINSTORMS	D >= MEAN	33.	18.	13.	4.
NUMBER OF RAINSTORMS	D >= 2 MEAN	15.	5.	6.	2.

TABLE A10. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION TUCSON AP AZ (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.382	.381	.335	.395
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.321	.354	.298	.371
A OF NONDIM. HYETOGRAPH	D >= MEAN	.320	.307	.220	.274
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.330	.267	.150	.160
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.456	.451	.433	.456
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.432	.436	.413	.445
NONDIM. 1ST TIME MOMENT	D >= MEAN	.430	.408	.373	.404
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.434	.382	.345	.305
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.290	.276	.258	.276
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.265	.260	.235	.266
NONDIM. 2ND TIME MOMENT	D >= MEAN	.264	.230	.198	.229
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.267	.205	.170	.156
NUMBER OF RAINSTORMS	ALL RAINSTORMS	591.	294.	135.	94.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	291.	167.	79.	74.
NUMBER OF RAINSTORMS	D >= MEAN	163.	77.	35.	38.
NUMBER OF RAINSTORMS	D >= 2 MEAN	79.	31.	16.	5.

TABLE A11. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WINSLOW AP AZ (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.447	.402	.399	.403
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.383	.373	.395	.377
A OF NONDIM. HYETOGRAPH	D >= MEAN	.303	.352	.317	.319
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.280	.321	.255	.130
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.479	.462	.459	.464
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.454	.450	.456	.453
NONDIM. 1ST TIME MOMENT	D >= MEAN	.421	.439	.418	.433
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.407	.425	.385	.339
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.312	.282	.288	.280
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.287	.264	.284	.269
NONDIM. 2ND TIME MOMENT	D >= MEAN	.254	.244	.252	.251
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.240	.229	.710	.159
NUMBER OF RAINSTORMS	ALL RAINSTORMS	343.	140.	67.	29.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	170.	84.	48.	19.
NUMBER OF RAINSTORMS	D >= MEAN	88.	39.	23.	11.
NUMBER OF RAINSTORMS	D >= 2 MEAN	43.	19.	6.	2.

TABLE A12. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION YUMA AP AZ (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.442	.437	.438	.455
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.419	.411	.433	.427
A OF NONDIM. HYETOGRAPH	D >= MEAN	.378	.394	.372	.356
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.345	.333	.828	0.000
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.478	.474	.475	.483
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.468	.462	.472	.473
NONDIM. 1ST TIME MOMENT	D >= MEAN	.451	.451	.443	.449
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.438	.423	.609	.333
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.312	.298	.298	.302
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.301	.280	.293	.289
NONDIM. 2ND TIME MOMENT	D >= MEAN	.284	.271	.267	.265
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.272	.242	.414	.165
NUMBER OF RAINSTORMS	ALL RAINSTORMS	167.	64.	33.	29.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	84.	30.	24.	19.
NUMBER OF RAINSTORMS	D >= MEAN	43.	17.	7.	13.
NUMBER OF RAINSTORMS	D >= 2 MEAN	24.	6.	1.	1.

TABLE A13. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ALICIA AR (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.364	.362	.304	.318
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.333	.314	.265	.277
A OF NONDIM. HYETOGRAPH	D >= MEAN	.334	.283	.261	.177
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.319	.231	.335	.191
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.448	.440	.414	.420
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.431	.412	.388	.398
NONDIM. 1ST TIME MOMENT	D >= MEAN	.432	.395	.386	.352
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.424	.370	.413	.359
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.281	.268	.242	.245
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.265	.237	.217	.223
NONDIM. 2ND TIME MOMENT	D >= MEAN	.265	.221	.216	.180
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.257	.198	.235	.183
NUMBER OF RAINSTORMS	ALL RAINSTORMS	424.	270.	142.	91.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	197.	134.	81.	51.
NUMBER OF RAINSTORMS	D >= MEAN	125.	85.	50.	30.
NUMBER OF RAINSTORMS	D >= 2 MEAN	68.	38.	19.	16.

TABLE A14. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION FORT SMITH AP AR (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.392	.387	.328	.343
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.312	.347	.289	.278
A OF NONDIM. HYETOGRAPH	D >= MEAN	.255	.294	.260	.169
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.212	.256	.187	.141
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.457	.454	.429	.434
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.423	.437	.411	.406
NONDIM. 1ST TIME MOMENT	D >= MEAN	.399	.413	.393	.355
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.378	.396	.354	.334
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.290	.280	.250	.252
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.256	.261	.233	.225
NONDIM. 2ND TIME MOMENT	D >= MEAN	.232	.240	.217	.180
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.212	.221	.178	.168
NUMBER OF RAINSTORMS	ALL RAINSTORMS	525.	278.	164.	119.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	261.	164.	108.	76.
NUMBER OF RAINSTORMS	D >= MEAN	153.	106.	63.	44.
NUMBER OF RAINSTORMS	D >= 2 MEAN	77.	37.	24.	17.

TABLE A15. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PRESCOTT SCS AR (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.357	.336	.315	.365
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.317	.286	.274	.313
A OF NONDIM. HYETOGRAPH	D >= MEAN	.296	.247	.261	.329
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.317	.186	.219	.275
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.446	.429	.418	.440
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.427	.404	.397	.423
NONDIM. 1ST TIME MOMENT	D >= MEAN	.417	.385	.390	.429
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.422	.355	.371	.408
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.279	.259	.242	.262
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.261	.231	.222	.241
NONDIM. 2ND TIME MOMENT	D >= MEAN	.251	.212	.213	.243
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.256	.185	.192	.220
NUMBER OF RAINSTORMS	ALL RAINSTORMS	461.	289.	190.	110.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	218.	166.	117.	76.
NUMBER OF RAINSTORMS	D >= MEAN	149.	96.	73.	42.
NUMBER OF RAINSTORMS	D >= 2 MEAN	74.	36.	23.	10.

TABLE A16. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BAKERSFIELD AP CA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.465	.465	.420	.437
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.430	.461	.403	.421
A OF NONDIM. HYETOGRAPH	D >= MEAN	.418	.447	.372	.469
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.254	.468	.363	.282
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.487	.488	.471	.475
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.474	.487	.465	.468
NONDIM. 1ST TIME MOMENT	D >= MEAN	.468	.482	.456	.480
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.408	.495	.450	.391
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.320	.312	.293	.295
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.308	.308	.285	.287
NONDIM. 2ND TIME MOMENT	D >= MEAN	.301	.295	.276	.294
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.241	.302	.280	.212
NUMBER OF RAINSTORMS	ALL RAINSTORMS	444.	204.	108.	71.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	256.	134.	80.	53.
NUMBER OF RAINSTORMS	D >= MEAN	131.	67.	43.	28.
NUMBER OF RAINSTORMS	D >= 2 MEAN	38.	18.	12.	7.

TABLE A17. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION EUREKA CI CA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.459	.452	.422	.445
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.445	.437	.416	.439
A OF NONDIM. HYETOGRAPH	D >= MEAN	.427	.448	.419	.417
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.425	.477	.468	.489
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.485	.482	.473	.481
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.480	.477	.470	.478
NONDIM. 1ST TIME MOMENT	D >= MEAN	.472	.480	.471	.470
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.469	.489	.487	.496
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.319	.308	.295	.299
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.313	.301	.290	.295
NONDIM. 2ND TIME MOMENT	D >= MEAN	.305	.302	.285	.280
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.302	.306	.299	.305
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1520.	869.	586.	367.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	930.	646.	429.	262.
NUMBER OF RAINSTORMS	D >= MEAN	468.	303.	201.	131.
NUMBER OF RAINSTORMS	D >= 2 MEAN	160.	90.	58.	34.

TABLE A18. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION FRESNO AP CA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.463	.420	.480	.435
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.457	.409	.481	.413
A OF NONDIM. HYETOGRAPH	D >= MEAN	.451	.425	.493	.436
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.441	.417	.475	.429
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.487	.472	.491	.475
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.485	.468	.490	.467
NONDIM. 1ST TIME MOMENT	D >= MEAN	.483	.473	.493	.474
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.477	.461	.482	.454
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.320	.296	.313	.293
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.318	.289	.310	.282
NONDIM. 2ND TIME MOMENT	D >= MEAN	.316	.292	.312	.287
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.310	.276	.300	.273
NUMBER OF RAINSTORMS	ALL RAINSTORMS	481.	281.	175.	121.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	319.	204.	127.	97.
NUMBER OF RAINSTORMS	D >= MEAN	158.	95.	73.	47.
NUMBER OF RAINSTORMS	D >= 2 MEAN	63.	28.	17.	7.

TABLE A19. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION LOS ANGELES AP CA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.456	.480	.505	.506
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.453	.493	.514	.520
A OF NONDIM. HYETOGRAPH	D >= MEAN	.458	.488	.495	.549
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.488	.534	.483	.738
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.485	.493	.501	.503
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.483	.497	.503	.508
NONDIM. 1ST TIME MOMENT	D >= MEAN	.484	.496	.499	.519
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.496	.515	.497	.581
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.318	.316	.319	.319
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.317	.318	.317	.324
NONDIM. 2ND TIME MOMENT	D >= MEAN	.318	.318	.307	.333
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.330	.339	.308	.395
NUMBER OF RAINSTORMS	ALL RAINSTORMS	311.	192.	103.	65.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	167.	117.	72.	46.
NUMBER OF RAINSTORMS	D >= MEAN	82.	56.	37.	22.
NUMBER OF RAINSTORMS	D >= 2 MEAN	34.	25.	13.	7.

TABLE A20. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION OAKLAND AP CA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.473	.459	.468	.482
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.468	.457	.468	.489
A OF NONDIM. HYETOGRAPH	D >= MEAN	.449	.434	.448	.471
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.451	.382	.492	.613
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.491	.486	.488	.494
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.489	.485	.488	.496
NONDIM. 1ST TIME MOMENT	D >= MEAN	.482	.477	.481	.488
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.483	.458	.495	.538
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.324	.311	.306	.312
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.322	.309	.304	.311
NONDIM. 2ND TIME MOMENT	D >= MEAN	.316	.298	.295	.300
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.317	.276	.310	.351
NUMBER OF RAINSTORMS	ALL RAINSTORMS	713.	365.	267.	173.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	424.	246.	206.	131.
NUMBER OF RAINSTORMS	D >= MEAN	236.	124.	102.	73.
NUMBER OF RAINSTORMS	D >= 2 MEAN	85.	42.	24.	13.

TABLE A21. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION RED BLUFF AP CA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.462	.457	.474	.481
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.450	.442	.473	.477
A OF NONDIM. HYETOGRAPH	D >= MEAN	.433	.390	.497	.480
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.413	.361	.496	.478
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.487	.483	.491	.493
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.482	.476	.491	.491
NONDIM. 1ST TIME MOMENT	D >= MEAN	.475	.455	.501	.490
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.465	.439	.510	.483
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.320	.306	.310	.313
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.315	.295	.305	.307
NONDIM. 2ND TIME MOMENT	D >= MEAN	.308	.272	.312	.304
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.299	.259	.324	.286
NUMBER OF RAINSTORMS	ALL RAINSTORMS	709.	381.	260.	171.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	406.	234.	190.	109.
NUMBER OF RAINSTORMS	D >= MEAN	200.	122.	98.	56.
NUMBER OF RAINSTORMS	D >= 2 MEAN	76.	43.	25.	17.

TABLE A22. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SACRAMENTO CI CA (1936-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.468	.460	.458	.496
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.449	.456	.450	.493
A OF NONDIM. HYETOGRAPH	D >= MEAN	.439	.443	.484	.515
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.417	.477	.501	.442
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.489	.485	.485	.499
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.482	.483	.481	.499
NONDIM. 1ST TIME MOMENT	D >= MEAN	.478	.480	.494	.507
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.469	.494	.500	.481
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.322	.309	.305	.316
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.315	.305	.299	.314
NONDIM. 2ND TIME MOMENT	D >= MEAN	.311	.299	.308	.319
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.302	.311	.308	.290
NUMBER OF RAINSTORMS	ALL RAINSTORMS	857.	509.	342.	227.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	550.	356.	249.	180.
NUMBER OF RAINSTORMS	D >= MEAN	276.	171.	125.	86.
NUMBER OF RAINSTORMS	D >= 2 MEAN	101.	54.	31.	16.

TABLE A23. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SAN FRAN. AP CA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.463	.442	.473	.463
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.444	.437	.471	.460
A OF NONDIM. HYETOGRAPH	D >= MEAN	.446	.443	.463	.442
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.500	.426	.457	.521
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.487	.479	.491	.487
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.480	.477	.491	.487
NONDIM. 1ST TIME MOMENT	D >= MEAN	.479	.477	.486	.481
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.500	.473	.478	.508
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.320	.305	.314	.307
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.314	.301	.312	.304
NONDIM. 2ND TIME MOMENT	D >= MEAN	.313	.297	.308	.289
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.334	.288	.293	.312
NUMBER OF RAINSTORMS	ALL RAINSTORMS	751.	348.	275.	156.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	429.	249.	187.	113.
NUMBER OF RAINSTORMS	D >= MEAN	218.	120.	104.	51.
NUMBER OF RAINSTORMS	D >= 2 MEAN	85.	36.	28.	18.

TABLE A24. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SAN FRAN. CI CA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.467	.450	.493	.486
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.447	.442	.495	.484
A OF NONDIM. HYETOGRAPH	D >= MEAN	.446	.404	.488	.488
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.395	.496	.520	.478
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.488	.480	.500	.494
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.481	.476	.501	.493
NONDIM. 1ST TIME MOMENT	D >= MEAN	.480	.461	.498	.493
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.461	.499	.508	.488
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.322	.306	.322	.311
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.315	.301	.321	.308
NONDIM. 2ND TIME MOMENT	D >= MEAN	.314	.282	.313	.306
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.294	.312	.318	.296
NUMBER OF RAINSTORMS	ALL RAINSTORMS	771.	386.	251.	184.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	465.	299.	173.	145.
NUMBER OF RAINSTORMS	D >= MEAN	267.	152.	94.	62.
NUMBER OF RAINSTORMS	D >= 2 MEAN	80.	39.	29.	20.

TABLE A25. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SANTA MARIA AP CA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.458	.414	.411	.455
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.432	.380	.411	.476
A OF NONDIM. HYETOGRAPH	D >= MEAN	.400	.312	.434	.491
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.371	.335	.543	.526
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.484	.467	.468	.483
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.475	.453	.468	.491
NONDIM. 1ST TIME MOMENT	D >= MEAN	.461	.427	.476	.496
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.448	.440	.514	.512
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.317	.294	.292	.307
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.308	.279	.287	.306
NONDIM. 2ND TIME MOMENT	D >= MEAN	.294	.253	.291	.305
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.282	.258	.324	.317
NUMBER OF RAINSTORMS	ALL RAINSTORMS	516.	282.	153.	118.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	319.	190.	104.	86.
NUMBER OF RAINSTORMS	D >= MEAN	162.	96.	53.	47.
NUMBER OF RAINSTORMS	D >= 2 MEAN	50.	36.	14.	11.

TABLE A26. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ALAMOSA AP CO (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.430	.386	.422	.350
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.366	.343	.391	.288
A OF NONDIM. HYETOGRAPH	D >= MEAN	.306	.288	.337	.169
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.323	.253	.169	.188
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.473	.455	.469	.440
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.449	.432	.456	.415
NONDIM. 1ST TIME MOMENT	D >= MEAN	.424	.408	.430	.366
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.430	.390	.354	.390
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.307	.279	.295	.262
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.283	.259	.281	.238
NONDIM. 2ND TIME MOMENT	D >= MEAN	.257	.236	.255	.187
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.264	.210	.191	.194
NUMBER OF RAINSTORMS	ALL RAINSTORMS	423.	153.	85.	42.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	225.	90.	60.	27.
NUMBER OF RAINSTORMS	D >= MEAN	108.	46.	28.	16.
NUMBER OF RAINSTORMS	D >= 2 MEAN	56.	19.	7.	4.

TABLE A27. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION DENVER AP CO (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.418	.423	.443	.403
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.371	.388	.439	.341
A OF NONDIM. HYETOGRAPH	D >= MEAN	.348	.310	.445	.201
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.299	.202	.269	.014
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.470	.468	.478	.456
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.452	.448	.476	.428
NONDIM. 1ST TIME MOMENT	D >= MEAN	.441	.414	.479	.362
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.422	.363	.425	.259
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.303	.290	.301	.281
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.285	.265	.295	.253
NONDIM. 2ND TIME MOMENT	D >= MEAN	.274	.230	.294	.194
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.255	.188	.244	.111
NUMBER OF RAINSTORMS	ALL RAINSTORMS	481.	192.	81.	56.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	232.	87.	53.	35.
NUMBER OF RAINSTORMS	D >= MEAN	129.	50.	28.	16.
NUMBER OF RAINSTORMS	D >= 2 MEAN	62.	25.	8.	4.

TABLE A28. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION GRANADA CO (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.419	.388	.410	.272
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.332	.345	.360	.210
A OF NONDIM. HYETOGRAPH	D >= MEAN	.323	.287	.294	.188
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.258	.225	.189	.118
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.467	.454	.461	.406
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.430	.432	.438	.376
NONDIM. 1ST TIME MOMENT	D >= MEAN	.423	.402	.411	.355
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.395	.375	.356	.282
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.300	.279	.286	.239
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.264	.252	.257	.207
NONDIM. 2ND TIME MOMENT	D >= MEAN	.256	.220	.234	.194
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.228	.190	.184	.145
NUMBER OF RAINSTORMS	ALL RAINSTORMS	379.	186.	108.	59.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	169.	92.	58.	34.
NUMBER OF RAINSTORMS	D >= MEAN	96.	44.	36.	17.
NUMBER OF RAINSTORMS	D >= 2 MEAN	53.	26.	15.	7.

TABLE A29. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION GRAND JUNCTION CO (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.417	.411	.455	.427
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.371	.412	.415	.417
A OF NONDIM. HYETOGRAPH	D >= MEAN	.304	.382	.349	.406
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.206	.313	.130	.400
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.470	.466	.482	.473
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.452	.464	.466	.469
NONDIM. 1ST TIME MOMENT	D >= MEAN	.426	.450	.442	.461
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.386	.412	.371	.437
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.303	.288	.303	.287
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.286	.284	.284	.282
NONDIM. 2ND TIME MOMENT	D >= MEAN	.259	.271	.256	.265
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.220	.238	.184	.265
NUMBER OF RAINSTORMS	ALL RAINSTORMS	374.	145.	73.	35.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	223.	97.	49.	30.
NUMBER OF RAINSTORMS	D >= MEAN	105.	51.	22.	12.
NUMBER OF RAINSTORMS	D >= 2 MEAN	37.	19.	7.	3.

TABLE A30. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PUEBLO AP CO (1954-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.425	.385	.365	.416
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.350	.340	.296	.395
A OF NONDIM. HYETOGRAPH	D >= MEAN	.335	.244	.303	.415
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.366	.126	.189	.495
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.471	.448	.446	.465
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.442	.424	.416	.453
NONDIM. 1ST TIME MOMENT	D >= MEAN	.435	.374	.409	.451
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.444	.307	.348	.463
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.305	.275	.272	.288
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.275	.249	.240	.276
NONDIM. 2ND TIME MOMENT	D >= MEAN	.268	.201	.236	.279
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.277	.142	.171	.282
NUMBER OF RAINSTORMS	ALL RAINSTORMS	335.	141.	74.	40.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	142.	77.	46.	26.
NUMBER OF RAINSTORMS	D >= MEAN	88.	41.	22.	15.
NUMBER OF RAINSTORMS	D >= 2 MEAN	45.	13.	9.	4.

TABLE A31. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BRIDGEPORT AP CT (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.411	.419	.422	.451
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.327	.375	.410	.441
A OF NONDIM. HYETOGRAPH	D >= MEAN	.289	.341	.374	.440
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.227	.282	.323	.431
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.465	.468	.471	.479
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.432	.449	.465	.474
NONDIM. 1ST TIME MOMENT	D >= MEAN	.414	.431	.449	.471
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.385	.402	.423	.469
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.299	.291	.293	.296
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.265	.268	.285	.288
NONDIM. 2ND TIME MOMENT	D >= MEAN	.247	.253	.2[illegible]	.283
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.218	.222	.243	.278
NUMBER OF RAINSTORMS	ALL RAINSTORMS	603.	306.	187.	120.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	279.	168.	109.	82.
NUMBER OF RAINSTORMS	D >= MEAN	166.	85.	62.	43.
NUMBER OF RAINSTORMS	D >= 2 MEAN	75.	38.	19.	15.

TABLE A32. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION HARTFORD AP CT (1955-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.444	.415	.445	.451
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.399	.360	.432	.415
A OF NONDIM. HYETOGRAPH	D >= MEAN	.346	.339	.363	.380
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.324	.332	.339	.347
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.478	.465	.478	.484
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.458	.441	.473	.472
NONDIM. 1ST TIME MOMENT	D >= MEAN	.435	.429	.441	.460
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.419	.420	.419	.451
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.311	.289	.302	.303
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.291	.263	.293	.288
NONDIM. 2ND TIME MOMENT	D >= MEAN	.268	.251	.259	.273
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.252	.243	.240	.267
NUMBER OF RAINSTORMS	ALL RAINSTORMS	494.	251.	168.	110.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	205.	141.	106.	65.
NUMBER OF RAINSTORMS	D >= MEAN	129.	76.	49.	41.
NUMBER OF RAINSTORMS	D >= 2 MEAN	69.	32.	17.	14.

TABLE A33. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WILMINGTON AP DE (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.389	.393	.365	.440
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.308	.334	.345	.416
A OF NONDIM. HYETOGRAPH	D >= MEAN	.288	.290	.306	.377
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.310	.228	.285	.429
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.457	.456	.447	.475
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.424	.431	.437	.463
NONDIM. 1ST TIME MOMENT	D >= MEAN	.414	.408	.417	.445
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.421	.378	.413	.447
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.291	.279	.272	.291
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.258	.252	.261	.277
NONDIM. 2ND TIME MOMENT	D >= MEAN	.248	.230	.243	.256
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.255	.201	.248	.258
NUMBER OF RAINSTORMS	ALL RAINSTORMS	461.	217.	144.	65.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	212.	112.	95.	40.
NUMBER OF RAINSTORMS	D >= MEAN	126.	66.	54.	24.
NUMBER OF RAINSTORMS	D >= 2 MEAN	64.	31.	18.	8.

TABLE A34. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION DAYTONA BH AP FL (1942-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.377	.326	.281	.271
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.315	.271	.224	.212
A OF NONDIM. HYETOGRAPH	D >= MEAN	.316	.230	.192	.217
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.312	.191	.190	.183
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.451	.425	.400	.399
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.424	.397	.368	.373
NONDIM. 1ST TIME MOMENT	D >= MEAN	.423	.377	.350	.373
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.420	.362	.357	.367
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.285	.252	.225	.226
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.257	.223	.196	.197
NONDIM. 2ND TIME MOMENT	D >= MEAN	.256	.202	.178	.195
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.253	.184	.175	.184
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1054.	464.	276.	123.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	509.	259.	166.	75.
NUMBER OF RAINSTORMS	D >= MEAN	327.	150.	103.	47.
NUMBER OF RAINSTORMS	D >= 2 MEAN	162.	65.	33.	16.

TABLE A35. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION JACKSONVILLE FL (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.379	.362	.337	.302
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.335	.272	.278	.283
A OF NONDIM. HYETOGRAPH	D >= MEAN	.306	.258	.242	.254
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.260	.260	.300	.117
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.451	.438	.429	.407
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.428	.397	.402	.393
NONDIM. 1ST TIME MOMENT	D >= MEAN	.414	.383	.387	.366
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.394	.379	.408	.280
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.284	.260	.250	.237
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.261	.220	.221	.226
NONDIM. 2ND TIME MOMENT	D >= MEAN	.248	.207	.204	.201
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.227	.199	.223	.135
NUMBER OF RAINSTORMS	ALL RAINSTORMS	822.	357.	217.	95.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	407.	200.	131.	64.
NUMBER OF RAINSTORMS	D >= MEAN	273.	117.	75	35.
NUMBER OF RAINSTORMS	D >= 2 MEAN	124.	52.	33.	9.

TABLE A36. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION KEY WEST AP FL (1958-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.361	.357	.285	.264
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.328	.333	.227	.257
A OF NONDIM. HYETOGRAPH	D >= MEAN	.342	.327	.226	.243
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.246	.250	.216	.215
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.444	.439	.403	.396
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.428	.423	.375	.392
NONDIM. 1ST TIME MOMENT	D >= MEAN	.430	.418	.374	.370
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.388	.385	.367	.369
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.278	.262	.233	.218
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.262	.245	.200	.210
NONDIM. 2ND TIME MOMENT	D >= MEAN	.263	.241	.200	.193
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.221	.205	.194	.185
NUMBER OF RAINSTORMS	ALL RAINSTORMS	632.	177.	82.	49.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	360.	103.	46.	34.
NUMBER OF RAINSTORMS	D >= MEAN	208.	60.	24.	16.
NUMBER OF RAINSTORMS	D >= 2 MEAN	76.	23.	11.	5.

TABLE A37. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION LAKELAND CI FL (1943-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.379	.321	.304	.281
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.328	.239	.253	.246
A OF NONDIM. HYETOGRAPH	D >= MEAN	.324	.234	.216	.251
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.338	.213	.257	.071
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.450	.420	.414	.402
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.426	.381	.385	.383
NONDIM. 1ST TIME MOMENT	D >= MEAN	.424	.378	.364	.375
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.429	.372	.382	.312
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.283	.246	.239	.230
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.260	.205	.210	.212
NONDIM. 2ND TIME MOMENT	D >= MEAN	.257	.200	.189	.205
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.262	.189	.201	.138
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1091.	466.	269.	147.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	554.	248.	151.	103.
NUMBER OF RAINSTORMS	D >= MEAN	351.	161.	89.	56.
NUMBER OF RAINSTORMS	D >= 2 MEAN	150.	69.	40.	14.

TABLE A38. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MIAMI AP FL (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.353	.344	.307	.287
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.321	.319	.237	.245
A OF NONDIM. HYETOGRAPH	D >= MEAN	.301	.285	.254	.184
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.259	.263	.222	.174
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.441	.433	.415	.409
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.424	.419	.381	.387
NONDIM. 1ST TIME MOMENT	D >= MEAN	.413	.407	.382	.356
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.394	.393	.365	.354
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.274	.259	.243	.233
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.257	.244	.211	.213
NONDIM. 2ND TIME MOMENT	D >= MEAN	.247	.231	.211	.185
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.227	.213	.189	.162
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1064.	396.	226.	105.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	585.	225.	141.	71.
NUMBER OF RAINSTORMS	D >= MEAN	350.	131.	82.	44.
NUMBER OF RAINSTORMS	D >= 2 MEAN	140.	53.	31.	8.

TABLE A39. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION TALLAHASSEE FL (1958-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.357	.342	.257	.335
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.304	.292	.153	.282
A OF NONDIM. HYETOGRAPH	D >= MEAN	.303	.273	.107	.203
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.338	.285	.083	.219
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.441	.429	.391	.431
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.415	.405	.344	.407
NONDIM. 1ST TIME MOMENT	D >= MEAN	.414	.389	.314	.371
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.423	.388	.311	.371
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.275	.253	.217	.253
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.248	.226	.171	.227
NONDIM. 2ND TIME MOMENT	D >= MEAN	.247	.215	.148	.193
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.256	.215	.142	.198
NUMBER OF RAINSTORMS	ALL RAINSTORMS	572.	259.	136.	69.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	279.	144.	79.	47.
NUMBER OF RAINSTORMS	D >= MEAN	189.	78.	47.	30.
NUMBER OF RAINSTORMS	D >= 2 MEAN	87.	38.	19.	10.

TABLE A40. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION TAMPA WSMO FL (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.377	.310	.289	.282
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.334	.274	.236	.206
A OF NONDIM. HYETOGRAPH	D >= MEAN	.322	.241	.210	.203
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.341	.214	.281	.175
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.451	.418	.399	.406
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.430	.396	.373	.373
NONDIM. 1ST TIME MOMENT	D >= MEAN	.422	.377	.360	.367
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.426	.366	.381	.327
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.284	.242	.226	.232
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.263	.217	.200	.200
NONDIM. 2ND TIME MOMENT	D >= MEAN	.255	.201	.188	.194
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.259	.193	.196	.152
NUMBER OF RAINSTORMS	ALL RAINSTORMS	649.	289.	150.	74.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	333.	159.	96.	46.
NUMBER OF RAINSTORMS	D >= MEAN	208.	99.	65.	27.
NUMBER OF RAINSTORMS	D >= 2 MEAN	101.	44.	17.	8.

TABLE A41. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WEST PALM BH FL (1942-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.359	.358	.309	.332
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.313	.333	.280	.258
A OF NONDIM. HYETOGRAPH	D >= MEAN	.295	.347	.285	.215
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.308	.311	.310	.131
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.444	.439	.414	.422
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.422	.426	.397	.388
NONDIM. 1ST TIME MOMENT	D >= MEAN	.414	.431	.394	.364
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.418	.416	.407	.341
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.278	.262	.239	.246
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.256	.245	.222	.215
NONDIM. 2ND TIME MOMENT	D >= MEAN	.247	.248	.218	.190
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.251	.231	.228	.160
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1340.	544.	286.	140.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	699.	319.	179.	92.
NUMBER OF RAINSTORMS	D >= MEAN	432.	199.	104.	52.
NUMBER OF RAINSTORMS	D >= 2 MEAN	190.	73.	37.	14.

TABLE A42. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ATHENS AP GA (1958-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.378	.363	.319	.438
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.299	.325	.243	.432
A OF NONDIM. HYETOGRAPH	D >= MEAN	.303	.336	.204	.380
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.243	.343	.228	.390
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.453	.442	.423	.472
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.421	.420	.388	.468
NONDIM. 1ST TIME MOMENT	D >= MEAN	.418	.418	.365	.442
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.389	.418	.381	.454
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.287	.267	.241	.290
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.254	.242	.206	.285
NONDIM. 2ND TIME MOMENT	D >= MEAN	.252	.238	.184	.263
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.223	.238	.192	.258
NUMBER OF RAINSTORMS	ALL RAINSTORMS	489.	204.	102.	81.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	242.	112.	60.	56.
NUMBER OF RAINSTORMS	D >= MEAN	156.	72.	33.	30.
NUMBER OF RAINSTORMS	D >= 2 MEAN	72.	29.	17.	8.

TABLE A43. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ATLANTA AP GA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.392	.389	.327	.368
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.329	.341	.289	.315
A OF NONDIM. HYETOGRAPH	D >= MEAN	.305	.329	.266	.232
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.282	.301	.272	.267
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.456	.455	.425	.446
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.429	.433	.406	.425
NONDIM. 1ST TIME MOMENT	D >= MEAN	.417	.423	.394	.390
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.401	.408	.399	.392
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.290	.279	.250	.270
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.263	.257	.229	.249
NONDIM. 2ND TIME MOMENT	D >= MEAN	.251	.249	.217	.216
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.235	.239	.219	.220
NUMBER OF RAINSTORMS	ALL RAINSTORMS	660.	314.	179.	90.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	329.	189.	113.	53.
NUMBER OF RAINSTORMS	D >= MEAN	198.	105.	66.	28.
NUMBER OF RAINSTORMS	D >= 2 MEAN	97.	40.	24.	11.

TABLE A44. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION AUGUSTA AP GA (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.361	.329	.340	.313
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.283	.247	.286	.294
A OF NONDIM. HYETOGRAPH	D >= MEAN	.283	.239	.213	.268
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.267	.265	.186	.163
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.444	.424	.432	.414
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.409	.383	.406	.401
NONDIM. 1ST TIME MOMENT	D >= MEAN	.405	.375	.365	.387
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.396	.380	.341	.347
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.277	.250	.253	.239
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.242	.206	.226	.226
NONDIM. 2ND TIME MOMENT	D >= MEAN	.238	.199	.186	.207
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.229	.206	.165	.167
NUMBER OF RAINSTORMS	ALL RAINSTORMS	622.	315.	146.	72.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	292.	164.	86.	47.
NUMBER OF RAINSTORMS	D >= MEAN	185.	103.	49.	26.
NUMBER OF RAINSTORMS	D >= 2 MEAN	96.	42.	17.	10.

TABLE A45. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION COLUMBUS AP GA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.351	.339	.371	.317
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.302	.286	.322	.290
A OF NONDIM. HYETOGRAPH	D >= MEAN	.275	.272	.295	.273
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.302	.273	.202	.151
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.441	.432	.437	.423
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.418	.408	.408	.409
NONDIM. 1ST TIME MOMENT	D >= MEAN	.405	.396	.395	.401
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.417	.391	.340	.363
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.274	.253	.262	.245
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.251	.228	.235	.230
NONDIM. 2ND TIME MOMENT	D >= MEAN	.239	.215	.225	.221
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.250	.215	.175	.191
NUMBER OF RAINSTORMS	ALL RAINSTORMS	717.	309.	162.	105.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	372.	167.	97.	68.
NUMBER OF RAINSTORMS	D >= MEAN	227.	95.	55.	36.
NUMBER OF RAINSTORMS	D >= 2 MEAN	103.	48.	20.	13.

TABLE A46. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MACON GA (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.409	.360	.309	.337
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.360	.305	.287	.349
A OF NONDIM. HYETOGRAPH	D >= MEAN	.326	.301	.211	.348
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.287	.236	.160	.186
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.464	.438	.424	.431
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.442	.410	.414	.432
NONDIM. 1ST TIME MOMENT	D >= MEAN	.426	.401	.383	.429
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.406	.374	.353	.337
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.297	.263	.242	.250
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.275	.235	.228	.247
NONDIM. 2ND TIME MOMENT	D >= MEAN	.259	.225	.202	.248
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.239	.201	.185	.160
NUMBER OF RAINSTORMS	ALL RAINSTORMS	622.	299.	170.	71.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	307.	180.	119.	44.
NUMBER OF RAINSTORMS	D >= MEAN	176.	98.	62.	25.
NUMBER OF RAINSTORMS	D >= 2 MEAN	91.	41.	19.	7.

TABLE A47. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ROME AP GA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.400	.393	.381	.346
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.342	.309	.314	.355
A OF NONDIM. HYETOGRAPH	D >= MEAN	.322	.304	.287	.345
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.251	.227	.305	.373
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.460	.452	.449	.442
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.435	.414	.419	.442
NONDIM. 1ST TIME MOMENT	D >= MEAN	.424	.409	.406	.433
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.393	.370	.421	.450
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.294	.277	.274	.259
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.268	.236	.242	.257
NONDIM. 2ND TIME MOMENT	D >= MEAN	.258	.230	.225	.253
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.226	.192	.230	.280
NUMBER OF RAINSTORMS	ALL RAINSTORMS	718.	308.	173.	108.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	355.	163.	109.	69.
NUMBER OF RAINSTORMS	D >= MEAN	226.	108.	61.	40.
NUMBER OF RAINSTORMS	D >= 2 MEAN	107.	40.	21.	11.

TABLE A48. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SAVANNAH AP GA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.401	.355	.300	.356
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.351	.325	.298	.276
A OF NONDIM. HYETOGRAPH	D >= MEAN	.342	.320	.288	.194
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.336	.381	.270	.270
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.459	.437	.415	.432
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.436	.421	.409	.390
NONDIM. 1ST TIME MOMENT	D >= MEAN	.430	.413	.407	.352
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.429	.441	.406	.381
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.292	.259	.238	.258
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.270	.240	.231	.221
NONDIM. 2ND TIME MOMENT	D >= MEAN	.264	.232	.225	.181
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.262	.256	.218	.206
NUMBER OF RAINSTORMS	ALL RAINSTORMS	845.	357.	215.	91.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	425.	201.	132.	53.
NUMBER OF RAINSTORMS	D >= MEAN	272.	123.	82.	33.
NUMBER OF RAINSTORMS	D >= 2 MEAN	140.	48.	21.	14.

TABLE A49. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BOISE AP ID (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.427	.484	.466	.466
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.397	.470	.448	.458
A OF NONDIM. HYETOGRAPH	D >= MEAN	.298	.387	.384	.390
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.285	.315	.341	.417
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.472	.493	.488	.488
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.459	.488	.481	.485
NONDIM. 1ST TIME MOMENT	D >= MEAN	.420	.455	.459	.461
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.410	.427	.445	.472
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.305	.317	.306	.306
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.293	.310	.294	.303
NONDIM. 2ND TIME MOMENT	D >= MEAN	.253	.276	.266	.277
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.243	.244	.245	.282
NUMBER OF RAINSTORMS	ALL RAINSTORMS	334.	145.	81.	51.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	209.	105.	57.	42.
NUMBER OF RAINSTORMS	D >= MEAN	106.	45.	29.	19.
NUMBER OF RAINSTORMS	D >= 2 MEAN	43.	13.	9.	2.

TABLE A50. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION LEWISTON AP ID (1954-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.399	.475	.452	.470
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.339	.468	.433	.457
A OF NONDIM. HYETOGRAPH	D >= MEAN	.299	.433	.350	.407
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.300	.386	.369	.455
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.463	.491	.482	.489
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.441	.489	.475	.484
NONDIM. 1ST TIME MOMENT	D >= MEAN	.422	.477	.447	.466
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.421	.461	.458	.485
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.296	.315	.305	.308
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.274	.310	.297	.301
NONDIM. 2ND TIME MOMENT	D >= MEAN	.256	.290	.264	.280
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.255	.272	.280	.287
NUMBER OF RAINSTORMS	ALL RAINSTORMS	358.	190.	108.	65.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	214.	132.	85.	49.
NUMBER OF RAINSTORMS	D >= MEAN	104.	64.	34.	27.
NUMBER OF RAINSTORMS	D >= 2 MEAN	37.	19.	10.	6.

TABLE A51. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION POCATELLO AP ID (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.449	.454	.467	.443
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.420	.455	.432	.441
A OF NONDIM. HYETOGRAPH	D >= MEAN	.373	.479	.400	.433
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.344	.464	.317	.602
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.481	.483	.487	.481
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.470	.483	.475	.480
NONDIM. 1ST TIME MOMENT	D >= MEAN	.451	.491	.464	.477
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.440	.480	.433	.534
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.314	.307	.309	.294
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.303	.303	.291	.291
NONDIM. 2ND TIME MOMENT	D >= MEAN	.284	.305	.274	.286
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.272	.295	.242	.329
NUMBER OF RAINSTORMS	ALL RAINSTORMS	411.	182.	78.	67.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	256.	122.	50.	51.
NUMBER OF RAINSTORMS	D >= MEAN	123.	64.	27.	27.
NUMBER OF RAINSTORMS	D >= 2 MEAN	49.	18.	9.	5.

TABLE A52. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CAIRO CI IL (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.401	.404	.347	.364
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.355	.379	.309	.359
A OF NONDIM. HYETOGRAPH	D >= MEAN	.327	.337	.250	.307
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.338	.317	.226	.215
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.462	.459	.437	.447
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.441	.446	.417	.446
NONDIM. 1ST TIME MOMENT	D >= MEAN	.429	.425	.393	.421
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.430	.411	.390	.387
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.295	.280	.257	.265
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.274	.266	.234	.260
NONDIM. 2ND TIME MOMENT	D >= MEAN	.262	.247	.210	.235
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.264	.237	.205	.201
NUMBER OF RAINSTORMS	ALL RAINSTORMS	644.	327.	190.	110.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	302.	190.	108.	75.
NUMBER OF RAINSTORMS	D >= MEAN	201.	118.	64.	35.
NUMBER OF RAINSTORMS	D >= 2 MEAN	96.	42.	24.	11.

TABLE A53. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CHICAGO MIDWAY IL (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.428	.388	.386	.384
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.386	.373	.366	.346
A OF NONDIM. HYETOGRAPH	D >= MEAN	.393	.342	.274	.302
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.396	.360	.250	.316
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.472	.456	.457	.455
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.454	.447	.447	.439
NONDIM. 1ST TIME MOMENT	D >= MEAN	.455	.434	.417	.426
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.453	.434	.406	.430
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.305	.277	.273	.273
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.287	.266	.261	.253
NONDIM. 2ND TIME MOMENT	D >= MEAN	.288	.252	.230	.236
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.287	.250	.214	.244
NUMBER OF RAINSTORMS	ALL RAINSTORMS	691.	375.	204.	124.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	341.	215.	131.	64.
NUMBER OF RAINSTORMS	D >= MEAN	192.	115.	74.	33.
NUMBER OF RAINSTORMS	D >= 2 MEAN	85.	48.	25.	15.

TABLE A54. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PEORIA AP IL (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.396	.392	.383	.388
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.340	.322	.355	.352
A OF NONDIM. HYETOGRAPH	D >= MEAN	.309	.252	.303	.356
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.306	.247	.188	.295
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.459	.454	.453	.456
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.435	.423	.439	.441
NONDIM. 1ST TIME MOMENT	D >= MEAN	.420	.392	.416	.443
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.418	.381	.368	.417
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.293	.277	.271	.273
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.268	.246	.252	.255
NONDIM. 2ND TIME MOMENT	D >= MEAN	.254	.217	.227	.256
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.251	.202	.179	.230
NUMBER OF RAINSTORMS	ALL RAINSTORMS	694.	375.	210.	104.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	324.	218.	126.	59.
NUMBER OF RAINSTORMS	D >= MEAN	197.	129.	72.	38.
NUMBER OF RAINSTORMS	D >= 2 MEAN	104.	48.	26.	13.

TABLE A55. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SPRINGFIELD AP IL (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.393	.369	.373	.405
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.330	.312	.335	.356
A OF NONDIM. HYETOGRAPH	D >= MEAN	.298	.267	.277	.353
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.333	.257	.213	.286
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.458	.445	.450	.461
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.430	.419	.434	.439
NONDIM. 1ST TIME MOMENT	D >= MEAN	.415	.400	.411	.435
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.429	.389	.379	.395
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.291	.267	.271	.281
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.263	.240	.253	.259
NONDIM. 2ND TIME MOMENT	D >= MEAN	.248	.219	.225	.252
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.263	.206	.201	.219
NUMBER OF RAINSTORMS	ALL RAINSTORMS	675.	333.	211.	123.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	327.	206.	133.	71.
NUMBER OF RAINSTORMS	D >= MEAN	188.	114.	69.	39.
NUMBER OF RAINSTORMS	D >= 2 MEAN	100.	44.	29.	16.

TABLE A56. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION EVANSVILLE AP IN (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.387	.371	.348	.390
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.383	.319	.324	.343
A OF NONDIM. HYETOGRAPH	D >= MEAN	.314	.252	.290	.274
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.324	.206	.240	.281
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.457	.447	.439	.455
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.433	.425	.426	.436
NONDIM. 1ST TIME MOMENT	D >= MEAN	.426	.395	.410	.407
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.428	.375	.386	.408
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.290	.272	.255	.273
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.267	.250	.241	.253
NONDIM. 2ND TIME MOMENT	D >= MEAN	.259	.220	.225	.224
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.262	.203	.203	.227
NUMBER OF RAINSTORMS	ALL RAINSTORMS	665.	301.	203.	115.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	326.	185.	116.	73.
NUMBER OF RAINSTORMS	D >= MEAN	206.	99.	66.	41.
NUMBER OF RAINSTORMS	D >= 2 MEAN	101.	38.	26.	11.

TABLE A57. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION FORT WAYNE AP IN (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.394	.389	.369	.413
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.343	.345	.334	.408
A OF NONDIM. HYETOGRAPH	D >= MEAN	.318	.322	.301	.349
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.319	.343	.165	.269
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.460	.456	.447	.464
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.439	.436	.430	.459
NONDIM. 1ST TIME MOMENT	D >= MEAN	.428	.427	.416	.432
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.426	.436	.358	.398
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.294	.279	.270	.280
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.273	.260	.253	.272
NONDIM. 2ND TIME MOMENT	D >= MEAN	.262	.248	.242	.247
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.260	.252	.184	.219
NUMBER OF RAINSTORMS	ALL RAINSTORMS	732.	377.	205.	148.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	375.	223.	125.	97.
NUMBER OF RAINSTORMS	D >= MEAN	224.	131.	76.	47.
NUMBER OF RAINSTORMS	D >= 2 MEAN	106.	50.	22.	19.

TABLE A58. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION INDIANAPOLIS IN (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.401	.394	.373	.376
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.345	.352	.342	.358
A OF NONDIM. HYETOGRAPH	D >= MEAN	.315	.318	.289	.356
A OF NONDIM. HYETOGRAPH	D. >= 2 MEAN	.336	.292	.285	.339
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.462	.456	.445	.450
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.438	.438	.429	.441
NONDIM. 1ST TIME MOMENT	D >= MEAN	.425	.425	.403	.439
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.433	.411	.400	.427
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.295	.280	.267	.268
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.272	.261	.251	.258
NONDIM. 2ND TIME MOMENT	D >= MEAN	.259	.246	.228	.255
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.266	.231	.228	.240
NUMBER OF RAINSTORMS	ALL RAINSTORMS	684.	351.	217.	124.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	331.	207.	132.	89.
NUMBER OF RAINSTORMS	D >= MEAN	196.	116.	75.	49.
NUMBER OF RAINSTORMS	D >= 2 MEAN	102.	44.	26.	9.

TABLE A59. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SOUTH BEND AP IN (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.425	.393	.417	.388
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.376	.353	.385	.332
A OF NONDIM. HYETOGRAPH	D >= MEAN	.366	.315	.355	.254
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.314	.255	.354	.257
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.471	.455	.465	.453
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.452	.436	.449	.430
NONDIM. 1ST TIME MOMENT	D >= MEAN	.447	.419	.439	.391
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.426	.388	.442	.398
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.305	.279	.288	.274
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.285	.259	.271	.251
NONDIM. 2ND TIME MOMENT	D >= MEAN	.280	.240	.258	.213
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.259	.208	.256	.217
NUMBER OF RAINSTORMS	ALL RAINSTORMS	752.	381.	230.	119.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	372.	223.	137.	80.
NUMBER OF RAINSTORMS	D >= MEAN	223.	117.	75.	45.
NUMBER OF RAINSTORMS	D >= 2 MEAN	99.	46.	26.	15.

TABLE A60. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BURLINGTON IA (1965-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.382	.388	.390	.471
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.337	.334	.358	.425
A OF NONDIM. HYETOGRAPH	D >= MEAN	.355	.302	.340	.333
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.345	.331	.414	.214
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.457	.455	.454	.481
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.439	.433	.441	.461
NONDIM. 1ST TIME MOMENT	D >= MEAN	.445	.421	.433	.428
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.440	.429	.460	.378
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.290	.279	.282	.306
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.273	.255	.267	.286
NONDIM. 2ND TIME MOMENT	D >= MEAN	.279	.243	.260	.256
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.273	.243	.280	.213
NUMBER OF RAINSTORMS	ALL RAINSTORMS	269.	149.	87.	56.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	153.	92.	54.	40.
NUMBER OF RAINSTORMS	D >= MEAN	88.	54.	34.	21.
NUMBER OF RAINSTORMS	D >= 2 MEAN	41.	17.	13.	9.

TABLE A61. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION DES MOINES AP IA (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.414	.365	.374	.394
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.355	.298	.324	.388
A OF NONDIM. HYETOGRAPH	D >= MEAN	.332	.271	.285	.349
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.311	.225	.205	.263
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.466	.444	.449	.460
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.440	.413	.428	.456
NONDIM. 1ST TIME MOMENT	D >= MEAN	.429	.399	.411	.443
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.418	.379	.384	.405
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.299	.270	.267	.283
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.274	.236	.243	.279
NONDIM. 2ND TIME MOMENT	D >= MEAN	.262	.225	.228	.260
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.251	.208	.205	.225
NUMBER OF RAINSTORMS	ALL RAINSTORMS	612.	358.	205.	119.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	293.	187.	135.	78.
NUMBER OF RAINSTORMS	D >= MEAN	172.	112.	79.	34.
NUMBER OF RAINSTORMS	D >= 2 MEAN	82.	49.	25.	14.

TABLE A62. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION DUBUQUE AP IA (1951-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.421	.417	.424	.380
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.367	.364	.388	.394
A OF NONDIM. HYETOGRAPH	D >= MEAN	.329	.337	.369	.397
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.283	.263	.305	.229
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.470	.464	.465	.458
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.449	.440	.448	.462
NONDIM. 1ST TIME MOMENT	D >= MEAN	.434	.425	.432	.458
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.416	.389	.408	.400
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.304	.286	.286	.282
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.283	.258	.271	.282
NONDIM. 2ND TIME MOMENT	D >= MEAN	.267	.245	.255	.278
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.249	.212	.235	.230
NUMBER OF RAINSTORMS	ALL RAINSTORMS	599.	347.	189.	119.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	300.	189.	114.	88.
NUMBER OF RAINSTORMS	D >= MEAN	182.	115.	58.	41.
NUMBER OF RAINSTORMS	D >= 2 MEAN	82.	47.	25.	10.

TABLE A63. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION IOWA CITY IA (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.418	.404	.396	.443
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.396	.356	.383	.413
A OF NONDIM. HYETOGRAPH	D >= MEAN	.377	.349	.399	.416
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.365	.278	.382	.415
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.468	.460	.457	.476
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.456	.438	.449	.463
NONDIM. 1ST TIME MOMENT	D >= MEAN	.446	.433	.450	.466
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.437	.398	.438	.459
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.301	.287	.277	.293
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.290	.264	.264	.277
NONDIM. 2ND TIME MOMENT	D >= MEAN	.279	.257	.268	.278
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.271	.222	.253	.267
NUMBER OF RAINSTORMS	ALL RAINSTORMS	576.	350.	206.	127.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	273.	197.	123.	75.
NUMBER OF RAINSTORMS	D >= MEAN	162.	113.	69.	46.
NUMBER OF RAINSTORMS	D >= 2 MEAN	78.	49.	27.	16.

TABLE A64. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SIOUX CITY AP IA (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.430	.383	.385	.444
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.365	.312	.341	.398
A OF NONDIM. HYETOGRAPH	D >= MEAN	.374	.285	.251	.365
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.345	.225	.198	.280
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.473	.452	.452	.473
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.454	.422	.432	.452
NONDIM. 1ST TIME MOMENT	D >= MEAN	.449	.410	.390	.435
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.437	.378	.370	.400
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.306	.276	.273	.291
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.287	.244	.252	.269
NONDIM. 2ND TIME MOMENT	D >= MEAN	.282	.232	.216	.252
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.271	.203	.199	.227
NUMBER OF RAINSTORMS	ALL RAINSTORMS	572.	333.	200.	119.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	275.	184.	124.	68.
NUMBER OF RAINSTORMS	D >= MEAN	156.	114.	60.	38.
NUMBER OF RAINSTORMS	D >= 2 MEAN	79.	42.	29.	18.

TABLE A65. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WATERLOO AP IA (1956-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.386	.377	.361	.375
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.342	.330	.314	.342
A OF NONDIM. HYETOGRAPH	D >= MEAN	.316	.306	.324	.349
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.318	.297	.367	.322
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.457	.450	.447	.452
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.438	.428	.428	.439
NONDIM. 1ST TIME MOMENT	D >= MEAN	.426	.414	.436	.443
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.424	.410	.447	.438
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.290	.273	.265	.271
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.271	.250	.243	.256
NONDIM. 2ND TIME MOMENT	D >= MEAN	.259	.237	.245	.254
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.257	.233	.263	.240
NUMBER OF RAINSTORMS	ALL RAINSTORMS	464.	282.	139.	100.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	220.	152.	89.	62.
NUMBER OF RAINSTORMS	D >= MEAN	139.	90.	47.	32.
NUMBER OF RAINSTORMS	D >= 2 MEAN	63.	38.	16.	13.

TABLE A66. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION COLUMBUS KS (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.397	.341	.344	.294
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.324	.287	.250	.258
A OF NONDIM. HYETOGRAPH	D >= MEAN	.329	.257	.220	.233
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.291	.236	.195	.241
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.460	.434	.432	.416
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.430	.408	.386	.398
NONDIM. 1ST TIME MOMENT	D >= MEAN	.429	.395	.370	.390
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.412	.386	.352	.390
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.293	.260	.256	.237
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.263	.232	.209	.218
NONDIM. 2ND TIME MOMENT	D >= MEAN	.263	.221	.195	.206
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.245	.209	.184	.212
NUMBER OF RAINSTORMS	ALL RAINSTORMS	504.	331.	221.	144.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	246.	174.	115.	92.
NUMBER OF RAINSTORMS	D >= MEAN	147.	108.	82.	51.
NUMBER OF RAINSTORMS	D >= 2 MEAN	71.	42.	23.	17.

TABLE A67. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CONCORDIA AP KS (1962-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.404	.393	.381	.368
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.347	.313	.320	.285
A OF NONDIM. HYETOGRAPH	D >= MEAN	.322	.322	.254	.257
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.308	.203	.304	.104
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.464	.454	.452	.445
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.441	.419	.427	.411
NONDIM. 1ST TIME MOMENT	D >= MEAN	.430	.420	.395	.403
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.425	.360	.418	.333
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.297	.279	.266	.263
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.275	.242	.238	.228
NONDIM. 2ND TIME MOMENT	D >= MEAN	.263	.242	.206	.217
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.258	.187	.219	.150
NUMBER OF RAINSTORMS	ALL RAINSTORMS	333.	190.	106.	72.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	164.	97.	72.	45.
NUMBER OF RAINSTORMS	D >= MEAN	103.	59.	38.	23.
NUMBER OF RAINSTORMS	D >= 2 MEAN	52.	25.	11.	8.

TABLE A68. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION DODGE CITY AP KS (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.406	.392	.394	.339
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.368	.390	.363	.289
A OF NONDIM. HYETOGRAPH	D >= MEAN	.345	.343	.341	.225
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.313	.346	.247	.200
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.464	.456	.457	.430
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.448	.452	.442	.407
NONDIM. 1ST TIME MOMENT	D >= MEAN	.438	.432	.431	.382
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.423	.423	.397	.391
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.298	.277	.278	.254
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.281	.271	.260	.229
NONDIM. 2ND TIME MOMENT	D >= MEAN	.272	.253	.250	.208
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.256	.236	.224	.196
NUMBER OF RAINSTORMS	ALL RAINSTORMS	493.	253.	157.	68.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	225.	153.	104.	44.
NUMBER OF RAINSTORMS	D >= MEAN	138.	87.	56.	31.
NUMBER OF RAINSTORMS	D >= 2 MEAN	73.	31.	17.	5.

TABLE A69. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION GOODLAND AP KS (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.437	.409	.406	.363
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.381	.346	.382	.274
A OF NONDIM. HYETOGRAPH	D >= MEAN	.368	.272	.332	.245
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.315	.232	.448	.137
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.475	.462	.459	.441
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.452	.436	.449	.400
NONDIM. 1ST TIME MOMENT	D >= MEAN	.444	.403	.426	.383
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.423	.381	.458	.333
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.309	.285	.283	.263
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.286	.257	.270	.221
NONDIM. 2ND TIME MOMENT	D >= MEAN	.278	.226	.253	.211
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.256	.203	.279	.163
NUMBER OF RAINSTORMS	ALL RAINSTORMS	494.	235.	114.	75.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	231.	126.	72.	42.
NUMBER OF RAINSTORMS	D >= MEAN	133.	67.	38.	26.
NUMBER OF RAINSTORMS	D >= 2 MEAN	78.	31.	12.	8.

TABLE A70. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION TOPEKA AP KS (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.404	.379	.367	.350
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.360	.344	.311	.332
A OF NONDIM. HYETOGRAPH	D >= MEAN	.357	.326	.284	.258
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.360	.246	.269	.301
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.463	.451	.440	.441
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.443	.433	.416	.431
NONDIM. 1ST TIME MOMENT	D >= MEAN	.439	.423	.405	.396
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.440	.390	.401	.416
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.296	.277	.262	.262
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.276	.257	.235	.253
NONDIM. 2ND TIME MOMENT	D >= MEAN	.272	.249	.226	.218
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.274	.216	.222	.234
NUMBER OF RAINSTORMS	ALL RAINSTORMS	541.	313.	219.	90.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	261.	186.	139.	60.
NUMBER OF RAINSTORMS	D >= MEAN	159.	101.	87.	33.
NUMBER OF RAINSTORMS	D >= 2 MEAN	74.	42.	28.	10.

TABLE A71. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WICHITA AP KS (1954-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.410	.389	.382	.380
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.366	.339	.345	.345
A OF NONDIM. HYETOGRAPH	D >= MEAN	.402	.320	.356	.334
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.420	.270	.455	.454
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.466	.455	.452	.447
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.447	.431	.431	.431
NONDIM. 1ST TIME MOMENT	D >= MEAN	.458	.421	.432	.425
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.463	.394	.471	.469
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.299	.277	.278	.267
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.281	.254	.256	.250
NONDIM. 2ND TIME MOMENT	D >= MEAN	.292	.245	.256	.245
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.296	.219	.288	.280
NUMBER OF RAINSTORMS	ALL RAINSTORMS	460.	227.	145.	88.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	208.	119.	82.	63.
NUMBER OF RAINSTORMS	D >= MEAN	133.	81.	53.	36.
NUMBER OF RAINSTORMS	D >= 2 MEAN	66.	34.	17.	9.

TABLE A72. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION LEXINGTON AP KY (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.402	.346	.350	.330
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.366	.309	.304	.330
A OF NONDIM. HYETOGRAPH	D >= MEAN	.357	.292	.241	.226
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.334	.253	.238	.229
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.462	.434	.440	.455
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.445	.417	.421	.432
NONDIM. 1ST TIME MOMENT	D >= MEAN	.440	.405	.393	.388
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.428	.384	.390	.375
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.295	.262	.261	.277
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.279	.245	.240	.253
NONDIM. 2ND TIME MOMENT	D >= MEAN	.273	.231	.213	.215
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.261	.213	.199	.199
NUMBER OF RAINSTORMS	ALL RAINSTORMS	782.	351.	181.	136.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	376.	208.	115.	98.
NUMBER OF RAINSTORMS	D >= MEAN	238.	120.	67.	42.
NUMBER OF RAINSTORMS	D >= 2 MEAN	117.	40.	22.	13.

TABLE A73. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION LOUISVILLE AP KY (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.405	.359	.368	.385
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.365	.333	.287	.357
A OF NONDIM. HYETOGRAPH	D >= MEAN	.369	.284	.231	.323
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.338	.264	.208	.239
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.463	.441	.445	.451
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.445	.426	.410	.439
NONDIM. 1ST TIME MOMENT	D >= MEAN	.444	.402	.388	.422
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.430	.382	.385	.378
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.296	.266	.268	.271
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.279	.250	.232	.258
NONDIM. 2ND TIME MOMENT	D >= MEAN	.277	.229	.210	.242
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.263	.210	.202	.197
NUMBER OF RAINSTORMS	ALL RAINSTORMS	710.	343.	195.	101.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	357.	204.	116.	74.
NUMBER OF RAINSTORMS	D >= MEAN	219.	110.	69.	41.
NUMBER OF RAINSTORMS	D >= 2 MEAN	103.	44.	22.	9.

TABLE A74. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BATON ROUGE AP LA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.373	.323	.245	.281
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.330	.276	.179	.244
A OF NONDIM. HYETOGRAPH	D >= MEAN	.324	.277	.118	.159
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.299	.258	.061	.113
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.449	.418	.387	.401
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.430	.391	.352	.379
NONDIM. 1ST TIME MOMENT	D >= MEAN	.425	.387	.312	.334
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.411	.374	.280	.285
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.282	.244	.217	.230
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.263	.217	.184	.211
NONDIM. 2ND TIME MOMENT	D >= MEAN	.259	.213	.151	.171
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.244	.195	.123	.136
NUMBER OF RAINSTORMS	ALL RAINSTORMS	647.	310.	172.	98.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	328.	178.	110.	69.
NUMBER OF RAINSTORMS	D >= MEAN	209.	111.	60.	38.
NUMBER OF RAINSTORMS	D >= 2 MEAN	91.	43.	29.	11.

TABLE A75. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION NEW ORLEANS AP LA (1954-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.380	.322	.261	.262
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.327	.294	.188	.211
A OF NONDIM. HYETOGRAPH	D >= MEAN	.320	.296	.158	.204
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.329	.275	.216	.248
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.452	.422	.395	.390
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.428	.403	.358	.359
NONDIM. 1ST TIME MOMENT	D >= MEAN	.424	.405	.342	.351
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.426	.402	.383	.395
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.286	.247	.218	.216
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.261	.226	.185	.188
NONDIM. 2ND TIME MOMENT	D >= MEAN	.257	.226	.167	.180
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.259	.217	.189	.210
NUMBER OF RAINSTORMS	ALL RAINSTORMS	626.	303.	149.	78.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	286.	181.	95.	51.
NUMBER OF RAINSTORMS	D >= MEAN	193.	111.	58.	31.
NUMBER OF RAINSTORMS	D >= 2 MEAN	95.	43.	16.	8.

TABLE A76. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SHREVEPORT AP LA (1960-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.385	.357	.331	.260
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.331	.299	.265	.227
A OF NONDIM. HYETOGRAPH	D >= MEAN	.318	.270	.226	.253
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.364	.242	.238	.226
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.454	.436	.418	.397
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.430	.407	.387	.376
NONDIM. 1ST TIME MOMENT	D >= MEAN	.422	.395	.368	.389
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.436	.380	.374	.399
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.288	.259	.243	.221
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.263	.226	.211	.203
NONDIM. 2ND TIME MOMENT	D >= MEAN	.255	.214	.191	.212
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.269	.199	.192	.208
NUMBER OF RAINSTORMS	ALL RAINSTORMS	328.	135.	84.	63.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	149.	75.	51.	41.
NUMBER OF RAINSTORMS	D >= MEAN	99.	47.	36.	23.
NUMBER OF RAINSTORMS	D >= 2 MEAN	49.	24.	9.	8.

TABLE A77. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CARIBOU AP ME (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.441	.452	.419	.448
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.389	.425	.403	.417
A OF NONDIM. HYETOGRAPH	D >= MEAN	.343	.377	.346	.401
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.270	.363	.304	.270
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.477	.481	.468	.480
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.456	.470	.459	.467
NONDIM. 1ST TIME MOMENT	D >= MEAN	.435	.449	.434	.458
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.404	.439	.410	.406
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.310	.306	.292	.302
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.290	.291	.282	.285
NONDIM. 2ND TIME MOMENT	D >= MEAN	.269	.268	.256	.277
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.238	.263	.235	.228
NUMBER OF RAINSTORMS	ALL RAINSTORMS	823.	409.	277.	188.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	415.	236.	183.	130.
NUMBER OF RAINSTORMS	D >= MEAN	218.	109.	89.	73.
NUMBER OF RAINSTORMS	D >= 2 MEAN	99.	40.	30.	19.

TABLE A78. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PORTLAND AP ME (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.435	.421	.418	.452
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.369	.356	.396	.453
A OF NONDIM. HYETOGRAPH	D >= MEAN	.367	.315	.362	.429
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.356	.244	.303	.351
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.476	.468	.466	.482
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.451	.442	.455	.482
NONDIM. 1ST TIME MOMENT	D >= MEAN	.447	.424	.438	.471
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.444	.392	.404	.443
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.309	.293	.789	.301
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.284	.264	.276	.295
NONDIM. 2ND TIME MOMENT	D >= MEAN	.281	.244	.260	.285
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.277	.212	.230	.257
NUMBER OF RAINSTORMS	ALL RAINSTORMS	664.	305.	209.	115.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	297.	155.	132.	78.
NUMBER OF RAINSTORMS	D >= MEAN	162.	87.	75.	42.
NUMBER OF RAINSTORMS	D >= 2 MEAN	74.	41.	26.	12.

TABLE A79. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BALTIMORE AP MD (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.423	.398	.367	.415
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.365	.322	.277	.373
A OF NONDIM. HYETOGRAPH	D >= MEAN	.359	.286	.232	.327
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.360	.235	.216	.319
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.470	.457	.445	.468
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.445	.425	.408	.451
NONDIM. 1ST TIME MOMENT	D >= MEAN	.441	.409	.388	.433
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.437	.385	.373	.421
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.303	.281	.265	.284
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.278	.249	.228	.267
NONDIM. 2ND TIME MOMENT	D >= MEAN	.275	.232	.208	.247
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.270	.207	.199	.243
NUMBER OF RAINSTORMS	ALL RAINSTORMS	566.	284.	166.	88.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	253.	155.	94.	52.
NUMBER OF RAINSTORMS	D >= MEAN	156.	85.	53.	25.
NUMBER OF RAINSTORMS	D >= 2 MEAN	75.	39.	22.	11.

TABLE A80. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BALTIMORE CI MD (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.444	.375	.388	.396
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.392	.363	.359	.321
A OF NONDIM. HYETOGRAPH	D >= MEAN	.376	.339	.344	.311
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.364	.309	.378	.261
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.479	.448	.456	.455
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.458	.437	.444	.423
NONDIM. 1ST TIME MOMENT	D >= MEAN	.449	.422	.436	.412
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.444	.405	.447	.391
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.312	.273	.280	.278
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.291	.261	.268	.245
NONDIM. 2ND TIME MOMENT	D >= MEAN	.283	.247	.262	.236
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.278	.234	.270	.217
NUMBER OF RAINSTORMS	ALL RAINSTORMS	619.	329.	182.	101.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	262.	170.	120.	60.
NUMBER OF RAINSTORMS	D >= MEAN	170.	100.	63.	35.
NUMBER OF RAINSTORMS	D >= 2 MEAN	96.	40.	24.	14.

TABLE A81. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BELTSVILLE MD (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.378	.321	.421	.370
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.319	.250	.387	.347
A OF NONDIM. HYETOGRAPH	D >= MEAN	.310	.201	.330	.293
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.328	.133	.276	.302
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.454	.423	.463	.443
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.426	.385	.446	.431
NONDIM. 1ST TIME MOMENT	D >= MEAN	.420	.355	.420	.404
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.424	.310	.393	.406
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.287	.252	.286	.269
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.260	.214	.265	.256
NONDIM. 2ND TIME MOMENT	D >= MEAN	.253	.185	.244	.227
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.258	.151	.221	.218
NUMBER OF RAINSTORMS	ALL RAINSTORMS	564.	314.	157.	121.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	224.	170.	89.	87.
NUMBER OF RAINSTORMS	D >= MEAN	153.	93.	51.	42.
NUMBER OF RAINSTORMS	D >= 2 MEAN	80.	38.	15.	12.

TABLE A82. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SINES DEEP CRK MD (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.393	.421	.380	.389
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.324	.385	.336	.357
A OF NONDIM. HYETOGRAPH	D >= MEAN	.297	.359	.277	.347
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.264	.321	.219	.264
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.458	.467	.453	.456
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.429	.451	.433	.442
NONDIM. 1ST TIME MOMENT	D >= MEAN	.416	.439	.408	.436
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.401	.418	.375	.399
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.292	.293	.276	.279
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.263	.275	.253	.263
NONDIM. 2ND TIME MOMENT	D >= MEAN	.250	.261	.227	.257
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.234	.241	.198	.217
NUMBER OF RAINSTORMS	ALL RAINSTORMS	986.	571.	300.	178.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	477.	343.	186.	124.
NUMBER OF RAINSTORMS	D >= MEAN	291.	205.	101.	69.
NUMBER OF RAINSTORMS	D >= 2 MEAN	126.	73.	31.	19.

TABLE A83. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BOSTON AP MA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.429	.448	.438	.436
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.364	.410	.429	.396
A OF NONDIM. HYETOGRAPH	D >= MEAN	.328	.364	.388	.364
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.299	.328	.340	.344
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.472	.476	.475	.473
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.446	.458	.469	.458
NONDIM. 1ST TIME MOMENT	D >= MEAN	.430	.435	.452	.440
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.416	.420	.430	.416
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.306	.301	.294	.292
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.280	.281	.285	.273
NONDIM. 2ND TIME MOMENT	D >= MEAN	.264	.258	.266	.256
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.249	.239	.240	.235
NUMBER OF RAINSTORMS	ALL RAINSTORMS	641.	361.	199.	144.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	311.	212.	117.	81.
NUMBER OF RAINSTORMS	D >= MEAN	193.	107.	64.	44.
NUMBER OF RAINSTORMS	D >= 2 MEAN	82.	45.	21.	15.

TABLE A84. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION NEW BEDFORD MA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.482	.486	.488	.494
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.458	.474	.464	.491
A OF NONDIM. HYETOGRAPH	D >= MEAN	.447	.484	.446	.484
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.512	.419	.479	.627
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.493	.496	.496	.494
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.485	.493	.488	.491
NONDIM. 1ST TIME MOMENT	D >= MEAN	.481	.497	.484	.491
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.503	.476	.500	.547
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.327	.322	.320	.315
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.318	.317	.309	.310
NONDIM. 2ND TIME MOMENT	D >= MEAN	.314	.315	.308	.308
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.336	.287	.322	.366
NUMBER OF RAINSTORMS	ALL RAINSTORMS	483.	274.	201.	130.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	229.	150.	113.	79.
NUMBER OF RAINSTORMS	D >= MEAN	127.	80.	66.	40.
NUMBER OF RAINSTORMS	D >= 2 MEAN	62.	25.	26.	12.

TABLE A85. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WORCESTER AP MA (1957-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.416	.454	.422	.418
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.356	.429	.394	.410
A OF NONDIM. HYETOGRAPH	D >= MEAN	.341	.422	.365	.428
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.295	.451	.317	.354
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.468	.483	.469	.469
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.443	.473	.457	.465
NONDIM. 1ST TIME MOMENT	D >= MEAN	.433	.471	.446	.470
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.409	.484	.430	.448
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.301	.305	.289	.290
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.276	.291	.276	.282
NONDIM. 2ND TIME MOMENT	D >= MEAN	.266	.288	.258	.290
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.242	.300	.234	.275
NUMBER OF RAINSTORMS	ALL RAINSTORMS	485.	246.	129.	111.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	230.	138.	83.	62.
NUMBER OF RAINSTORMS	D >= MEAN	128.	70.	41.	35.
NUMBER OF RAINSTORMS	D >= 2 MEAN	61.	29.	12.	13.

TABLE A86. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION DETROIT MI (1960-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.411	.381	.465	.490
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.384	.341	.446	.471
A OF NONDIM. HYETOGRAPH	D >= MEAN	.343	.291	.454	.474
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.321	.218	.503	.460
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.466	.450	.485	.495
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.453	.431	.477	.487
NONDIM. 1ST TIME MOMENT	D >= MEAN	.436	.409	.479	.485
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.425	.361	.492	.468
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.300	.275	.305	.317
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.287	.255	.292	.307
NONDIM. 2ND TIME MOMENT	D >= MEAN	.269	.234	.289	.304
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.259	.191	.305	.295
NUMBER OF RAINSTORMS	ALL RAINSTORMS	460.	230.	146.	71.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	223.	126.	90.	45.
NUMBER OF RAINSTORMS	D >= MEAN	136.	72.	50.	23.
NUMBER OF RAINSTORMS	D >= 2 MEAN	69.	23.	15.	9.

TABLE A87. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION FLINT AP MI (1958-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.440	.400	.433	.427
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.390	.356	.404	.376
A OF NONDIM. HYETOGRAPH	D >= MEAN	.376	.347	.387	.395
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.350	.271	.374	.411
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.478	.460	.475	.472
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.459	.440	.464	.453
NONDIM. 1ST TIME MOMENT	D >= MEAN	.454	.438	.459	.457
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.446	.408	.467	.459
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.311	.285	.295	.293
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.293	.263	.281	.267
NONDIM. 2ND TIME MOMENT	D >= MEAN	.287	.258	.275	.274
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.279	.231	.292	.260
NUMBER OF RAINSTORMS	ALL RAINSTORMS	497.	263.	115.	90.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	250.	156.	71.	48.
NUMBER OF RAINSTORMS	D >= MEAN	143.	89.	40.	27.
NUMBER OF RAINSTORMS	D >= 2 MEAN	62.	31.	11.	9.

TABLE A88. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION LANSING AP MI (1959-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.441	.371	.404	.430
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.379	.311	.388	.453
A OF NONDIM. HYETOGRAPH	D >= MEAN	.360	.261	.324	.439
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.389	.150	.340	.473
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.477	.447	.460	.474
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.453	.418	.449	.481
NONDIM. 1ST TIME MOMENT	D >= MEAN	.444	.392	.422	.475
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.454	.344	.414	.480
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.310	.273	.280	.293
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.286	.244	.266	.298
NONDIM. 2ND TIME MOMENT	D >= MEAN	.277	.221	.239	.292
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.288	.175	.227	.293
NUMBER OF RAINSTORMS	ALL RAINSTORMS	479.	239.	132.	99.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	227.	131.	79.	63.
NUMBER OF RAINSTORMS	D >= MEAN	141.	77.	47.	32.
NUMBER OF RAINSTORMS	D >= 2 MEAN	70.	31.	12.	12.

TABLE A89. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MARQUETTE CI MI (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.422	.433	.419	.426
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.365	.411	.380	.404
A OF NONDIM. HYETOGRAPH	D >= MEAN	.350	.377	.347	.362
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.292	.351	.336	.367
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.470	.473	.469	.470
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.446	.462	.453	.459
NONDIM. 1ST TIME MOMENT	D >= MEAN	.437	.445	.439	.438
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.411	.429	.435	.444
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.303	.298	.290	.287
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.280	.284	.272	.272
NONDIM. 2ND TIME MOMENT	D >= MEAN	.270	.266	.259	.252
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.245	.244	.258	.253
NUMBER OF RAINSTORMS	ALL RAINSTORMS	758.	450.	254.	146.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	361.	249.	148.	86.
NUMBER OF RAINSTORMS	D >= MEAN	213.	135.	81.	50.
NUMBER OF RAINSTORMS	D >= 2 MEAN	89.	57.	28.	21.

TABLE A90. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MUSKEGON AP MI (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.409	.415	.405	.467
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.338	.398	.382	.431
A OF NONDIM. HYETOGRAPH	D >= MEAN	.305	.366	.348	.388
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.284	.306	.327	.327
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.466	.466	.460	.483
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.438	.458	.450	.468
NONDIM. 1ST TIME MOMENT	D >= MEAN	.423	.443	.437	.455
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.412	.421	.431	.425
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.299	.289	.280	.303
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.271	.275	.268	.288
NONDIM. 2ND TIME MOMENT	D >= MEAN	.257	.258	.252	.276
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.245	.233	.249	.246
NUMBER OF RAINSTORMS	ALL RAINSTORMS	695.	327.	213.	110.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	342.	198.	147.	70.
NUMBER OF RAINSTORMS	D >= MEAN	201.	104.	79.	41.
NUMBER OF RAINSTORMS	D >= 2 MEAN	91.	38.	22.	14.

TABLE A91. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SAULT ST.MARIE MI (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.446	.444	.412	.431
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.415	.434	.410	.429
A OF NONDIM. HYETOGRAPH	D >= MEAN	.388	.397	.397	.399
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.377	.304	.358	.308
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.480	.479	.466	.474
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.469	.474	.463	.472
NONDIM. 1ST TIME MOMENT	D >= MEAN	.458	.460	.459	.460
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.452	.420	.446	.421
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.314	.300	.287	.292
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.302	.292	.282	.287
NONDIM. 2ND TIME MOMENT	D >= MEAN	.291	.277	.275	.273
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.285	.238	.263	.233
NUMBER OF RAINSTORMS	ALL RAINSTORMS	858.	441.	304.	180.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	477.	255.	180.	119.
NUMBER OF RAINSTORMS	D >= MEAN	262.	138.	95.	63.
NUMBER OF RAINSTORMS	D >= 2 MEAN	104.	59.	29.	17.

TABLE A92. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION DULUTH AP MN (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.428	.446	.448	.423
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.373	.425	.434	.373
A OF NONDIM. HYETOGRAPH	D >= MEAN	.362	.388	.401	.409
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.350	.352	.379	.336
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.474	.478	.477	.470
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.452	.469	.470	.452
NONDIM. 1ST TIME MOMENT	D >= MEAN	.446	.453	.451	.467
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.443	.431	.430	.437
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.307	.301	.296	.289
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.286	.290	.284	.267
NONDIM. 2ND TIME MOMENT	D >= MEAN	.279	.275	.267	.280
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.276	.263	.241	.252
NUMBER OF RAINSTORMS	ALL RAINSTORMS	695.	402.	216.	139.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	310.	213.	124.	91.
NUMBER OF RAINSTORMS	D >= MEAN	185.	126.	65.	51.
NUMBER OF RAINSTORMS	D >= 2 MEAN	88.	45.	24.	15.

TABLE A93. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MINN-ST PAUL, MN (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.431	.390	.414	.395
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.398	.346	.404	.377
A OF NONDIM. HYETOGRAPH	D >= MEAN	.408	.309	.352	.331
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.412	.282	.318	.323
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.475	.457	.467	.459
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.461	.436	.462	.451
NONDIM. 1ST TIME MOMENT	D >= MEAN	.464	.420	.439	.432
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.464	.414	.421	.424
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.308	.280	.285	.281
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.295	.257	.278	.268
NONDIM. 2ND TIME MOMENT	D >= MEAN	.297	.242	.253	.250
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.297	.232	.233	.247
NUMBER OF RAINSTORMS	ALL RAINSTORMS	681.	336.	210.	134.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	314.	178.	131.	80.
NUMBER OF RAINSTORMS	D >= MEAN	188.	109.	64.	39.
NUMBER OF RAINSTORMS	D >= 2 MEAN	84.	43.	28.	14.

TABLE A94. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ROCHESTER, MN (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.419	.403	.398	.377
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.347	.347	.371	.361
A OF NONDIM. HYETOGRAPH	D >= MEAN	.297	.333	.339	.350
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.296	.289	.223	.298
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.468	.460	.459	.450
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.438	.437	.448	.440
NONDIM. 1ST TIME MOMENT	D >= MEAN	.416	.426	.434	.431
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.413	.401	.382	.391
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.301	.281	.279	.269
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.272	.255	.265	.259
NONDIM. 2ND TIME MOMENT	D >= MEAN	.249	.245	.252	.250
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.247	.221	.208	.217
NUMBER OF RAINSTORMS	ALL RAINSTORMS	648.	380.	228.	140.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	303.	217.	152.	82.
NUMBER OF RAINSTORMS	D >= MEAN	187.	111.	82.	47.
NUMBER OF RAINSTORMS	D >= 2 MEAN	79.	49.	27.	17.

TABLE A95. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ST CLOUD AP MN (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.394	.406	.398	.403
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.328	.354	.336	.371
A OF NONDIM. HYETOGRAPH	D >= MEAN	.286	.323	.313	.332
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.280	.264	.239	.287
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.460	.461	.459	.462
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.433	.438	.432	.448
NONDIM. 1ST TIME MOMENT	D >= MEAN	.414	.423	.423	.432
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.413	.390	.386	.401
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.293	.284	.279	.280
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.266	.260	.251	.266
NONDIM. 2ND TIME MOMENT	D >= MEAN	.248	.244	.241	.249
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.246	.211	.210	.226
NUMBER OF RAINSTORMS	ALL RAINSTORMS	649.	332.	231.	106.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	302.	178.	137.	67.
NUMBER OF RAINSTORMS	D >= MEAN	177.	98.	75.	39.
NUMBER OF RAINSTORMS	D >= 2 MEAN	95.	43.	31.	13.

TABLE A96. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MERIDIAN AP MS (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.376	.343	.282	.313
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.300	.313	.236	.262
A OF NONDIM. HYETOGRAPH	D >= MEAN	.269	.288	.171	.281
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.295	.201	.140	.186
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.450	.433	.407	.423
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.419	.415	.382	.399
NONDIM. 1ST TIME MOMENT	D >= MEAN	.405	.399	.345	.404
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.413	.365	.327	.376
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.284	.262	.234	.247
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.253	.244	.208	.221
NONDIM. 2ND TIME MOMENT	D >= MEAN	.238	.228	.175	.222
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.246	.191	.163	.180
NUMBER OF RAINSTORMS	ALL RAINSTORMS	626.	297.	142.	94.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	321.	171.	93.	63.
NUMBER OF RAINSTORMS	D >= MEAN	195.	105.	52.	35.
NUMBER OF RAINSTORMS	D >= 2 MEAN	87.	44.	16.	6.

TABLE A97. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ALTON MR (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.385	.383	.365	.396
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.356	.317	.366	.372
A OF NONDIM. HYETOGRAPH	D >= MEAN	.298	.295	.329	.326
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.305	.301	.173	.217
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.454	.446	.447	.459
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.439	.416	.444	.449
NONDIM. 1ST TIME MOMENT	D >= MEAN	.416	.403	.427	.433
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.413	.400	.355	.399
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.288	.269	.265	.278
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.272	.236	.260	.268
NONDIM. 2ND TIME MOMENT	D >= MEAN	.249	.223	.241	.247
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.246	.216	.177	.215
NUMBER OF RAINSTORMS	ALL RAINSTORMS	472.	322.	185.	121.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	218.	187.	124.	86.
NUMBER OF RAINSTORMS	D >= MEAN	143.	116.	70.	43.
NUMBER OF RAINSTORMS	D >= 2 MEAN	71.	43.	22.	14.

TABLE A98. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION HIGH POINT MR (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.417	.408	.337	.347
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.373	.366	.297	.319
A OF NONDIM. HYETOGRAPH	D >= MEAN	.332	.322	.281	.339
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.295	.326	.221	.312
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.469	.464	.432	.440
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.451	.447	.413	.427
NONDIM. 1ST TIME MOMENT	D >= MEAN	.434	.428	.402	.439
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.415	.431	.366	.422
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.303	.286	.253	.257
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.284	.264	.230	.246
NONDIM. 2ND TIME MOMENT	D >= MEAN	.267	.246	.220	.248
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.249	.249	.186	.223
NUMBER OF RAINSTORMS	ALL RAINSTORMS	567.	384.	214.	127.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	262.	216.	137.	90.
NUMBER OF RAINSTORMS	D >= MEAN	157.	131.	73.	47.
NUMBER OF RAINSTORMS	D >= 2 MEAN	75.	46.	24.	16.

TABLE A99. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ST LOUIS AP MR (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.406	.362	.345	.391
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.362	.331	.311	.378
A OF NONDIM. HYETOGRAPH	D >= MEAN	.320	.289	.230	.355
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.325	.184	.200	.297
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.462	.440	.434	.458
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.442	.422	.417	.452
NONDIM. 1ST TIME MOMENT	D >= MEAN	.421	.401	.382	.438
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.421	.358	.361	.423
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.295	.263	.258	.280
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.275	.244	.240	.273
NONDIM. 2ND TIME MOMENT	D >= MEAN	.254	.223	.208	.262
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.255	.181	.181	.240
NUMBER OF RAINSTORMS	ALL RAINSTORMS	608.	280.	199.	113.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	306.	153.	132.	76.
NUMBER OF RAINSTORMS	D >= MEAN	174.	92.	76.	44.
NUMBER OF RAINSTORMS	D >= 2 MEAN	85.	37.	22.	11.

TABLE A100. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SPRINGFIELD AP MR (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.416	.365	.366	.304
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.359	.318	.334	.262
A OF NONDIM. HYETOGRAPH	D >= MEAN	.341	.278	.294	.209
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.337	.256	.339	.121
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.467	.443	.448	.423
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.442	.423	.434	.405
NONDIM. 1ST TIME MOMENT	D >= MEAN	.433	.406	.416	.383
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.428	.397	.436	.325
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.300	.267	.270	.245
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.275	.244	.253	.228
NONDIM. 2ND TIME MOMENT	D >= MEAN	.267	.226	.237	.203
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.262	.213	.250	.162
NUMBER OF RAINSTORMS	ALL RAINSTORMS	630.	322.	206.	131.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	289.	183.	131.	93.
NUMBER OF RAINSTORMS	D >= MEAN	163.	106.	70.	48.
NUMBER OF RAINSTORMS	D >= 2 MEAN	88.	48.	24.	13.

TABLE A101. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BILLINGS AP MT (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.446	.418	.435	.420
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.415	.393	.425	.398
A OF NONDIM. HYETOGRAPH	D >= MEAN	.367	.371	.392	.387
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.345	.321	.355	.426
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.480	.469	.476	.474
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.467	.459	.472	.466
NONDIM. 1ST TIME MOMENT	D >= MEAN	.448	.448	.459	.464
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.437	.429	.448	.475
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.313	.294	.300	.292
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.300	.281	.293	.282
NONDIM. 2ND TIME MOMENT	D >= MEAN	.281	.271	.283	.281
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.270	.254	.279	.282
NUMBER OF RAINSTORMS	ALL RAINSTORMS	537.	212.	114.	74.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	260.	131.	76.	56.
NUMBER OF RAINSTORMS	D >= MEAN	147.	66.	42.	28.
NUMBER OF RAINSTORMS	D >= 2 MEAN	59.	25.	14.	6.

TABLE A102. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION GLENDIVE MT (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.455	.423	.403	.371
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.401	.370	.317	.352
A OF NONDIM. HYETOGRAPH	D >= MEAN	.379	.322	.290	.353
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.314	.301	.280	.204
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.483	.469	.463	.447
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.463	.447	.430	.437
NONDIM. 1ST TIME MOMENT	D >= MEAN	.453	.425	.415	.432
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.430	.418	.403	.390
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.316	.296	.284	.270
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.296	.270	.247	.256
NONDIM. 2ND TIME MOMENT	D >= MEAN	.286	.246	.235	.248
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.263	.237	.228	.201
NUMBER OF RAINSTORMS	ALL RAINSTORMS	501.	325.	145.	83.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	237.	179.	79.	57.
NUMBER OF RAINSTORMS	D >= MEAN	122.	89.	44.	27.
NUMBER OF RAINSTORMS	D >= 2 MEAN	62.	37.	16.	7.

TABLE A103. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION GREAT FALLS AP MT (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.444	.451	.428	.464
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.407	.436	.434	.432
A OF NONDIM. HYETOGRAPH	D >= MEAN	.351	.403	.381	.373
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.363	.272	.302	.218
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.479	.479	.474	.487
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.466	.472	.474	.475
NONDIM. 1ST TIME MOMENT	D >= MEAN	.444	.456	.452	.454
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.448	.395	.400	.382
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.313	.304	.299	.308
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.299	.294	.298	.294
NONDIM. 2ND TIME MOMENT	D >= MEAN	.277	.275	.272	.271
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.281	.221	.219	.209
NUMBER OF RAINSTORMS	ALL RAINSTORMS	571.	239.	134.	102.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	330.	153.	90.	75.
NUMBER OF RAINSTORMS	D >= MEAN	176.	64.	45.	38.
NUMBER OF RAINSTORMS	D >= 2 MEAN	59.	24.	10.	10.

TABLE A104. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION HELENA AP AP MT (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.443	.486	.438	.448
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.404	.474	.443	.448
A OF NONDIM. HYETOGRAPH	D >= MEAN	.411	.427	.441	.399
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.297	.379	.290	.476
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.479	.494	.476	.482
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.464	.489	.476	.482
NONDIM. 1ST TIME MOMENT	D >= MEAN	.464	.470	.475	.465
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.417	.445	.422	.488
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.312	.318	.297	.302
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.297	.310	.293	.300
NONDIM. 2ND TIME MOMENT	D >= MEAN	.297	.294	.290	.282
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.251	.275	.239	.311
NUMBER OF RAINSTORMS	ALL RAINSTORMS	547.	243.	102.	71.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	284.	156.	69.	55.
NUMBER OF RAINSTORMS	D >= MEAN	158.	80.	35.	25.
NUMBER OF RAINSTORMS	D >= 2 MEAN	54.	31.	12.	7.

TABLE A105. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION KALISPELL AP MT (1953-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.472	.459	.442	.402
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.458	.446	.426	.389
A OF NONDIM. HYETOGRAPH	D >= MEAN	.464	.421	.379	.395
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.447	.361	.374	.237
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.490	.485	.480	.466
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.485	.480	.475	.461
NONDIM. 1ST TIME MOMENT	D >= MEAN	.487	.472	.460	.464
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.481	.454	.459	.406
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.323	.309	.301	.286
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.319	.302	.291	.279
NONDIM. 2ND TIME MOMENT	D >= MEAN	.320	.292	.276	.273
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.314	.272	.279	.225
NUMBER OF RAINSTORMS	ALL RAINSTORMS	517.	239.	160.	77.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	312.	166.	107.	60.
NUMBER OF RAINSTORMS	D >= MEAN	162.	90.	48.	30.
NUMBER OF RAINSTORMS	D >= 2 MEAN	52.	25.	14.	7.

TABLE A106. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MILES CITY AP MT (1952-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.447	.461	.488	.478
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.364	.464	.467	.446
A OF NONDIM. HYETOGRAPH	D >= MEAN	.265	.455	.457	.440
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.277	.422	.527	.380
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.479	.489	.496	.493
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.448	.491	.489	.482
NONDIM. 1ST TIME MOMENT	D >= MEAN	.409	.491	.486	.480
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.419	.478	.509	.460
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.313	.312	.323	.312
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.281	.308	.312	.303
NONDIM. 2ND TIME MOMENT	D >= MEAN	.242	.304	.293	.274
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.252	.301	.349	.248
NUMBER OF RAINSTORMS	ALL RAINSTORMS	62.	30.	11.	8.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	27.	19.	9.	6.
NUMBER OF RAINSTORMS	D >= MEAN	15.	11.	3.	2.
NUMBER OF RAINSTORMS	D >= 2 MEAN	8.	5.	1.	1.

TABLE A107. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MISSOULA AP MT (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.432	.460	.454	.442
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.394	.432	.458	.443
A OF NONDIM. HYETOGRAPH	D >= MEAN	.355	.393	.408	.398
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.211	.310	.321	.343
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.475	.484	.484	.478
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.461	.473	.485	.477
NONDIM. 1ST TIME MOMENT	D >= MEAN	.445	.456	.468	.461
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.390	.417	.437	.439
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.309	.308	.308	.296
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.295	.295	.307	.295
NONDIM. 2ND TIME MOMENT	D >= MEAN	.279	.277	.286	.280
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.223	.240	.256	.262
NUMBER OF RAINSTORMS	ALL RAINSTORMS	608.	266.	136.	92.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	384.	188.	99.	75.
NUMBER OF RAINSTORMS	D >= MEAN	205.	86.	46.	42.
NUMBER OF RAINSTORMS	D >= 2 MEAN	73.	24.	9.	6.

TABLE A108. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION GRAND ISLAND NE (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.426	.421	.434	.344
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.364	.371	.396	.267
A OF NONDIM. HYETOGRAPH	D >= MEAN	.321	.355	.352	.215
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.316	.268	.262	.222
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.472	.468	.474	.436
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.447	.448	.458	.402
NONDIM. 1ST TIME MOMENT	D >= MEAN	.428	.439	.439	.380
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.425	.400	.401	.378
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.305	.291	.294	.257
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.280	.270	.275	.226
NONDIM. 2ND TIME MOMENT	D >= MEAN	.262	.261	.256	.203
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.258	.231	.224	.197
NUMBER OF RAINSTORMS	ALL RAINSTORMS	578.	297.	165.	108.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	254.	161.	101.	61.
NUMBER OF RAINSTORMS	D >= MEAN	156.	94.	61.	34.
NUMBER OF RAINSTORMS	D >= 2 MEAN	87.	37.	23.	12.

TABLE A109. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION NORTH PLATTE NE (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.415	.376	.385	.286
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.380	.336	.317	.252
A OF NONDIM. HYETOGRAPH	D >= MEAN	.384	.287	.307	.169
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.283	.181	.229	.047
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.468	.448	.452	.413
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.452	.428	.423	.397
NONDIM. 1ST TIME MOMENT	D >= MEAN	.451	.401	.418	.361
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.411	.344	.384	.288
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.301	.274	.272	.237
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.285	.250	.242	.220
NONDIM. 2ND TIME MOMENT	D >= MEAN	.284	.225	.239	.187
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.244	.181	.208	.123
NUMBER OF RAINSTORMS	ALL RAINSTORMS	526.	270.	151.	74.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	233.	151.	88.	42.
NUMBER OF RAINSTORMS	D >= MEAN	153.	92.	50.	25.
NUMBER OF RAINSTORMS	D >= 2 MEAN	66.	35.	18.	10.

TABLE A110. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SCOTTSBLUFF AP NE (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.435	.398	.482	.403
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.400	.334	.462	.375
A OF NONDIM. HYETOGRAPH	D >= MEAN	.401	.313	.384	.395
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.336	.228	.458	.072
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.475	.460	.491	.462
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.460	.434	.480	.450
NONDIM. 1ST TIME MOMENT	D >= MEAN	.458	.423	.444	.449
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.433	.384	.477	.301
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.309	.283	.315	.282
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.293	.256	.305	.269
NONDIM. 2ND TIME MOMENT	D >= MEAN	.291	.244	.279	.277
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.267	.207	.321	.162
NUMBER OF RAINSTORMS	ALL RAINSTORMS	535.	225.	104.	64.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	236.	120.	49.	41.
NUMBER OF RAINSTORMS	D >= MEAN	137.	73.	28.	21.
NUMBER OF RAINSTORMS	D >= 2 MEAN	62.	32.	14.	5.

TABLE A111. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION VALENTINE AP NE (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.394	.402	.406	.428
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.313	.342	.375	.391
A OF NONDIM. HYETOGRAPH	D >= MEAN	.291	.344	.327	.314
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.283	.238	.293	.296
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.461	.461	.463	.474
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.429	.436	.449	.460
NONDIM. 1ST TIME MOMENT	D >= MEAN	.418	.435	.426	.434
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.416	.387	.413	.426
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.294	.283	.282	.295
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.262	.253	.265	.281
NONDIM. 2ND TIME MOMENT	D >= MEAN	.252	.251	.246	.258
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.249	.208	.235	.246
NUMBER OF RAINSTORMS	ALL RAINSTORMS	505.	263.	162.	87.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	231.	137.	93.	59.
NUMBER OF RAINSTORMS	D >= MEAN	140.	81.	57.	26.
NUMBER OF RAINSTORMS	D >= 2 MEAN	73.	40.	22.	8.

TABLE A112. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ELKO AP NV (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.464	.478	.432	.409
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.436	.471	.411	.385
A OF NONDIM. HYETOGRAPH	D >= MEAN	.364	.414	.436	.292
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.261	.372	.324	.225
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.486	.491	.476	.466
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.476	.487	.468	.458
NONDIM. 1ST TIME MOMENT	D >= MEAN	.449	.466	.474	.426
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.401	.451	.426	.398
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.320	.315	.300	.288
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.310	.310	.287	.278
NONDIM. 2ND TIME MOMENT	D >= MEAN	.282	.288	.289	.249
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.235	.265	.245	.237
NUMBER OF RAINSTORMS	ALL RAINSTORMS	314.	136.	81.	41.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	205.	94.	48.	33.
NUMBER OF RAINSTORMS	D >= MEAN	83.	41.	15.	19.
NUMBER OF RAINSTORMS	D >= 2 MEAN	25.	11.	5.	2.

TABLE A113. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ELY AP NV (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.459	.453	.463	.429
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.443	.431	.467	.423
A OF NONDIM. HYETOGRAPH	D >= MEAN	.397	.432	.391	.424
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.317	.240	.327	.290
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.485	.481	.488	.474
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.479	.473	.489	.471
NONDIM. 1ST TIME MOMENT	D >= MEAN	.460	.472	.463	.469
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.429	.400	.439	.415
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.318	.307	.310	.295
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.312	.298	.310	.292
NONDIM. 2ND TIME MOMENT	D >= MEAN	.294	.294	.281	.293
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.263	.224	.248	.243
NUMBER OF RAINSTORMS	ALL RAINSTORMS	389.	151.	89.	46.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	247.	106.	59.	37.
NUMBER OF RAINSTORMS	D >= MEAN	127.	59.	30.	16.
NUMBER OF RAINSTORMS	D >= 2 MEAN	47.	15.	10.	4.

TABLE A114. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION LAS VEGAS AP NV (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.391	.355	.378	.482
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.329	.326	.384	.541
A OF NONDIM. HYETOGRAPH	D >= MEAN	.292	.312	.305	.414
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.397	.119	.063	.628
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.460	.438	.446	.494
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.435	.421	.448	.514
NONDIM. 1ST TIME MOMENT	D >= MEAN	.418	.401	.408	.471
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.465	.316	.301	.543
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.293	.259	.267	.305
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.268	.246	.263	.321
NONDIM. 2ND TIME MOMENT	D >= MEAN	.251	.228	.228	.287
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.299	.146	.126	.346
NUMBER OF RAINSTORMS	ALL RAINSTORMS	101.	34.	20.	11.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	48.	22.	12.	8.
NUMBER OF RAINSTORMS	D >= MEAN	26.	12.	6.	3.
NUMBER OF RAINSTORMS	D >= 2 MEAN	12.	3.	3.	1.

TABLE A115. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION RENO AP NV (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.471	.407	.417	.497
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.454	.350	.348	.485
A OF NONDIM. HYETOGRAPH	D >= MEAN	.369	.301	.223	.365
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.314	.214	.147	.607
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.488	.464	.468	.498
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.480	.443	.443	.494
NONDIM. 1ST TIME MOMENT	D >= MEAN	.448	.423	.397	.451
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.424	.367	.342	.536
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.321	.291	.285	.312
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.314	.265	.256	.306
NONDIM. 2ND TIME MOMENT	D >= MEAN	.281	.248	.209	.260
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.258	.204	.170	.336
NUMBER OF RAINSTORMS	ALL RAINSTORMS	183.	84.	58.	31.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	91.	57.	42.	26.
NUMBER OF RAINSTORMS	D >= MEAN	41.	33.	19.	14.
NUMBER OF RAINSTORMS	D >= 2 MEAN	21.	8.	5.	2.

TABLE A116. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WINNEMUCCA AP NV (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.439	.435	.414	.453
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.418	.396	.394	.445
A OF NONDIM. HYETOGRAPH	D >= MEAN	.405	.410	.391	.466
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.389	.274	.251	.256
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.478	.476	.467	.484
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.470	.461	.459	.481
NONDIM. 1ST TIME MOMENT	D >= MEAN	.464	.465	.452	.487
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.456	.405	.390	.404
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.312	.300	.291	.302
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.304	.281	.282	.297
NONDIM. 2ND TIME MOMENT	D >= MEAN	.297	.285	.280	.298
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.290	.231	.228	.227
NUMBER OF RAINSTORMS	ALL RAINSTORMS	272.	101.	58.	41.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	165.	62.	41.	33.
NUMBER OF RAINSTORMS	D >= MEAN	80.	35.	21.	15.
NUMBER OF RAINSTORMS	D >= 2 MEAN	29.	13.	7.	3.

TABLE A117. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CONCORD AP NH (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.431	.434	.421	.428
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.368	.399	.408	.415
A OF NONDIM. HYETOGRAPH	D >= MEAN	.339	.351	.389	.462
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.300	.326	.357	.409
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.474	.472	.470	.472
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.450	.455	.464	.466
NONDIM. 1ST TIME MOMENT	D >= MEAN	.437	.431	.458	.479
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.418	.414	.448	.445
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.307	.297	.291	.292
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.283	.277	.282	.284
NONDIM. 2ND TIME MOMENT	D >= MEAN	.270	.252	.271	.294
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.251	.236	.261	.256
NUMBER OF RAINSTORMS	ALL RAINSTORMS	665.	371.	191.	128.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	345.	203.	120.	80.
NUMBER OF RAINSTORMS	D >= MEAN	192.	102.	61.	43.
NUMBER OF RAINSTORMS	D >= 2 MEAN	83.	49.	23.	13.

TABLE A118. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MT WASHINGTON NH (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.491	.474	.473	.438
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.491	.458	.447	.413
A OF NONDIM. HYETOGRAPH	D >= MEAN	.484	.477	.451	.384
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.454	.466	.432	.320
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.497	.490	.490	.477
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.497	.484	.481	.468
NONDIM. 1ST TIME MOMENT	D >= MEAN	.495	.490	.483	.458
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.484	.486	.474	.431
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.331	.313	.311	.299
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.331	.304	.298	.288
NONDIM. 2ND TIME MOMENT	D >= MEAN	.328	.308	.298	.276
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.318	.301	.288	.253
NUMBER OF RAINSTORMS	ALL RAINSTORMS	795.	484.	330.	262.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	403.	271.	187.	166.
NUMBER OF RAINSTORMS	D >= MEAN	221.	140.	99.	96.
NUMBER OF RAINSTORMS	D >= 2 MEAN	107.	71.	45.	27.

TABLE A119. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION NEWARK AP NJ (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.403	.402	.412	.438
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.343	.369	.389	.392
A OF NONDIM. HYETOGRAPH	D >= MEAN	.315	.318	.342	.383
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.301	.269	.221	.283
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.463	.461	.465	.476
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.438	.445	.456	.459
NONDIM. 1ST TIME MOMENT	D >= MEAN	.425	.423	.435	.454
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.417	.399	.380	.414
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.296	.284	.288	.293
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.272	.266	.277	.272
NONDIM. 2ND TIME MOMENT	D >= MEAN	.258	.246	.258	.263
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.251	.228	.204	.230
NUMBER OF RAINSTORMS	ALL RAINSTORMS	646.	317.	202.	141.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	325.	178.	129.	88.
NUMBER OF RAINSTORMS	D >= MEAN	205.	98.	67.	51.
NUMBER OF RAINSTORMS	D >= 2 MEAN	88.	44.	23.	16.

TABLE A120. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION TRENTON CI NJ (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.426	.407	.431	.416
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.369	.370	.428	.370
A OF NONDIM. HYETOGRAPH	D >= MEAN	.343	.331	.421	.373
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.326	.366	.495	.365
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.472	.460	.474	.466
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.449	.442	.472	.446
NONDIM. 1ST TIME MOMENT	D >= MEAN	.436	.426	.475	.445
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.432	.440	.509	.438
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.305	.285	.295	.283
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.282	.263	.292	.262
NONDIM. 2ND TIME MOMENT	D >= MEAN	.270	.248	.293	.260
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.265	.261	.339	.257
NUMBER OF RAINSTORMS	ALL RAINSTORMS	611.	336.	213.	118.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	286.	180.	123.	68.
NUMBER OF RAINSTORMS	D >= MEAN	162.	103.	67.	39.
NUMBER OF RAINSTORMS	D >= 2 MEAN	86.	47.	26.	14.

TABLE A121. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ALBUQUERQUE AP NM (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.416	.365	.394	.420
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.341	.339	.385	.358
A OF NONDIM. HYETOGRAPH	D >= MEAN	.320	.302	.356	.318
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.354	.441	.376	.253
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.467	.445	.458	.457
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.438	.430	.453	.432
NONDIM. 1ST TIME MOMENT	D >= MEAN	.428	.408	.438	.403
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.437	.465	.436	.351
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.301	.269	.282	.285
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.272	.255	.277	.259
NONDIM. 2ND TIME MOMENT	D >= MEAN	.261	.236	.259	.229
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.270	.281	.262	.182
NUMBER OF RAINSTORMS	ALL RAINSTORMS	342.	134.	75.	28.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	181.	81.	52.	22.
NUMBER OF RAINSTORMS	D >= MEAN	105.	48.	27.	12.
NUMBER OF RAINSTORMS	D >= 2 MEAN	43.	14.	8.	3.

TABLE A122. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CARRIZOZO NM (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.385	.364	.339	.330
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.311	.313	.334	.306
A OF NONDIM. HYETOGRAPH	D >= MEAN	.291	.270	.240	.250
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.182	.197	.167	.100
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.456	.443	.440	.427
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.426	.418	.435	.415
NONDIM. 1ST TIME MOMENT	D >= MEAN	.414	.399	.395	.390
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.368	.359	.351	.300
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.290	.265	.260	.250
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.259	.237	.247	.234
NONDIM. 2ND TIME MOMENT	D >= MEAN	.247	.218	.208	.210
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.201	.182	.170	.141
NUMBER OF RAINSTORMS	ALL RAINSTORMS	446.	244.	106.	51.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	212.	135.	66.	41.
NUMBER OF RAINSTORMS	D >= MEAN	115.	83.	33.	19.
NUMBER OF RAINSTORMS	D >= 2 MEAN	51.	28.	12.	4.

TABLE A123. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CLAYTON AP NM (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.417	.410	.376	.376
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.368	.364	.277	.335
A OF NONDIM. HYETOGRAPH	D >= MEAN	.341	.337	.253	.370
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.288	.341	.250	.214
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.468	.461	.454	.449
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.447	.440	.416	.431
NONDIM. 1ST TIME MOMENT	D >= MEAN	.436	.428	.405	.440
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.411	.424	.403	.358
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.301	.286	.275	.271
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.281	.261	.237	.248
NONDIM. 2ND TIME MOMENT	D >= MEAN	.269	.247	.225	.255
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.244	.245	.223	.191
NUMBER OF RAINSTORMS	ALL RAINSTORMS	477.	243.	106.	65.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	233.	141.	63.	45.
NUMBER OF RAINSTORMS	D >= MEAN	142.	76.	38.	23.
NUMBER OF RAINSTORMS	D >= 2 MEAN	57.	33.	14.	8.

TABLE A124. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WHITE SANDS NM (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.405	.378	.387	.334
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.361	.329	.346	.265
A OF NONDIM. HYETOGRAPH	D >= MEAN	.345	.294	.249	.239
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.343	.250	.223	.157
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.464	.453	.453	.423
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.445	.432	.436	.392
NONDIM. 1ST TIME MOMENT	D >= MEAN	.437	.415	.394	.374
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.433	.399	.374	.303
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.298	.277	.275	.253
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.279	.253	.256	.221
NONDIM. 2ND TIME MOMENT	D >= MEAN	.270	.239	.215	.206
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.267	.222	.191	.151
NUMBER OF RAINSTORMS	ALL RAINSTORMS	301.	134.	51.	38.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	139.	69.	35.	27.
NUMBER OF RAINSTORMS	D >= MEAN	83.	38.	19.	18.
NUMBER OF RAINSTORMS	D >= 2 MEAN	32.	23.	5.	5.

TABLE A125. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ALBANY AP NY (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.417	.403	.418	.415
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.342	.360	.366	.409
A OF NONDIM. HYETOGRAPH	D >= MEAN	.306	.314	.352	.310
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.259	.263	.277	.315
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.468	.462	.466	.467
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.438	.444	.445	.462
NONDIM. 1ST TIME MOMENT	D >= MEAN	.421	.422	.435	.425
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.398	.397	.396	.431
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.301	.285	.288	.283
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.271	.264	.267	.276
NONDIM. 2ND TIME MOMENT	D >= MEAN	.255	.241	.258	.236
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.231	.214	.224	.238
NUMBER OF RAINSTORMS	ALL RAINSTORMS	725.	392.	210.	137.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	354.	221.	136.	89.
NUMBER OF RAINSTORMS	D >= MEAN	207.	117.	70.	44.
NUMBER OF RAINSTORMS	D >= 2 MEAN	92.	40.	26.	16.

TABLE A126. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BINGHAMPTON NY (1951-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.430	.424	.406	.363
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.388	.403	.383	.331
A OF NONDIM. HYETOGRAPH	D >= MEAN	.340	.350	.386	.329
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.325	.358	.300	.146
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.473	.470	.463	.450
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.455	.461	.453	.435
NONDIM. 1ST TIME MOMENT	D >= MEAN	.435	.438	.451	.426
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.427	.439	.416	.326
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.306	.296	.286	.269
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.288	.284	.275	.251
NONDIM. 2ND TIME MOMENT	D >= MEAN	.268	.262	.271	.243
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.260	.266	.231	.160
NUMBER OF RAINSTORMS	ALL RAINSTORMS	752.	399.	185.	113.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	365.	236.	111.	64.
NUMBER OF RAINSTORMS	D >= MEAN	202.	127.	63.	33.
NUMBER OF RAINSTORMS	D >= 2 MEAN	109.	48.	19.	9.

TABLE A127. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BUFFALO AP NY (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.429	.430	.406	.452
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.403	.402	.383	.427
A OF NONDIM. HYETOGRAPH	D >= MEAN	.376	.335	.335	.357
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.341	.277	.380	.326
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.478	.472	.465	.483
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.463	.460	.454	.473
NONDIM. 1ST TIME MOMENT	D >= MEAN	.451	.431	.434	.450
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.437	.408	.458	.441
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.307	.296	.287	.304
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.296	.279	.274	.294
NONDIM. 2ND TIME MOMENT	D >= MEAN	.285	.250	.254	.269
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.270	.225	.268	.269
NUMBER OF RAINSTORMS	ALL RAINSTORMS	776.	386.	213.	148.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	384.	215.	128.	108.
NUMBER OF RAINSTORMS	D >= MEAN	213.	116.	65.	54.
NUMBER OF RAINSTORMS	D >= 2 MEAN	99.	51.	24.	15.

TABLE A128. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CANTON NY (194[illegible]-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.443	.444	.421	.460
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.408	.421	.410	.441
A OF NONDIM. HYETOGRAPH	D >= MEAN	.391	.407	.354	.422
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.397	.367	.348	.401
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.479	.477	.467	.483
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.464	.466	.460	.475
NONDIM. 1ST TIME MOMENT	D >= MEAN	.456	.458	.437	.467
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.455	.434	.428	.462
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.312	.305	.291	.303
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.297	.292	.280	.291
NONDIM. 2ND TIME MOMENT	D >= MEAN	.289	.281	.255	.277
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.288	.254	.247	.268
NUMBER OF RAINSTORMS	ALL RAINSTORMS	769.	435.	241.	158.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	331.	232.	143.	102.
NUMBER OF RAINSTORMS	D >= MEAN	208.	132.	77.	54.
NUMBER OF RAINSTORMS	D >= 2 MEAN	97.	53.	32.	20.

TABLE A129. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION N.Y.CENTRL PK. NY (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.431	.406	.417	.457
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.384	.367	.376	.442
A OF NONDIM. HYETOGRAPH	D >= MEAN	.364	.352	.302	.367
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.316	.338	.203	.266
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.472	.461	.465	.483
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.452	.442	.446	.477
NONDIM. 1ST TIME MOMENT	D >= MEAN	.442	.435	.413	.441
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.420	.416	.369	.394
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.306	.284	.287	.299
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.285	.260	.268	.290
NONDIM. 2ND TIME MOMENT	D >= MEAN	.275	.250	.233	.257
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.254	.240	.188	.220
NUMBER OF RAINSTORMS	ALL RAINSTORMS	645.	346.	199.	139.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	305.	188.	122.	92.
NUMBER OF RAINSTORMS	D >= MEAN	167.	114.	65.	47.
NUMBER OF RAINSTORMS	D >= 2 MEAN	92.	39.	25.	14.

TABLE A130. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION NY LA GUARDIA NY (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.415	.420	.408	.470
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.367	.392	.403	.425
A OF NONDIM. HYETOGRAPH	D >= MEAN	.363	.342	.363	.433
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.357	.315	.295	.382
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.468	.465	.465	.484
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.449	.451	.462	.465
NONDIM. 1ST TIME MOMENT	D >= MEAN	.445	.427	.447	.462
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.444	.413	.411	.440
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.302	.285	.285	.298
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.282	.268	.278	.278
NONDIM. 2ND TIME MOMENT	D >= MEAN	.278	.244	.267	.274
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.277	.236	.237	.251
NUMBER OF RAINSTORMS	ALL RAINSTORMS	617.	312.	189.	123.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	278.	173.	118.	76.
NUMBER OF RAINSTORMS	D >= MEAN	168.	88.	65.	42.
NUMBER OF RAINSTORMS	D >= 2 MEAN	85.	46.	21.	17.

TABLE A131. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ROCHESTER AP NY (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.397	.403	.409	.435
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.342	.384	.370	.394
A OF NONDIM. HYETOGRAPH	D >= MEAN	.319	.366	.385	.386
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.263	.366	.231	.334
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.461	.464	.463	.473
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.439	.454	.446	.457
NONDIM. 1ST TIME MOMENT	D >= MEAN	.427	.449	.447	.450
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.404	.452	.385	.415
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.295	.288	.290	.292
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.272	.277	.272	.274
NONDIM. 2ND TIME MOMENT	D >= MEAN	.260	.271	.276	.267
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.237	.267	.207	.238
NUMBER OF RAINSTORMS	ALL RAINSTORMS	747.	361.	185.	126.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	377.	202.	117.	85.
NUMBER OF RAINSTORMS	D >= MEAN	209.	116.	60.	49.
NUMBER OF RAINSTORMS	D >= 2 MEAN	90.	39.	22.	17.

TABLE A132. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SYRACUSE AP NY (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.438	.430	.414	.425
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.393	.405	.393	.410
A OF NONDIM. HYETOGRAPH	D >= MEAN	.394	.343	.344	.342
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.342	.430	.270	.187
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.475	.472	.465	.470
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.456	.461	.454	.464
NONDIM. 1ST TIME MOMENT	D >= MEAN	.454	.436	.434	.435
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.429	.477	.404	.364
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.309	.298	.290	.292
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.290	.284	.278	.284
NONDIM. 2ND TIME MOMENT	D >= MEAN	.287	.259	.258	.258
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.263	.298	.234	.195
NUMBER OF RAINSTORMS	ALL RAINSTORMS	789.	425.	241.	149.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	383.	219.	152.	111.
NUMBER OF RAINSTORMS	D >= MEAN	211.	116.	71.	56.
NUMBER OF RAINSTORMS	D >= 2 MEAN	97.	54.	23.	11.

TABLE A133. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WOODLANDS-ARD, NY (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.439	.425	.405	.412
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.378	.376	.371	.412
A OF NONDIM. HYETOGRAPH	D >= MEAN	.345	.344	.390	.380
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.311	.263	.299	.408
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.477	.468	.462	.466
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.452	.445	.448	.467
NONDIM. 1ST TIME MOMENT	D >= MEAN	.437	.426	.455	.448
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.424	.388	.411	.453
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.310	.294	.286	.291
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.286	.268	.271	.289
NONDIM. 2ND TIME MOMENT	D >= MEAN	.270	.248	.272	.267
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.258	.214	.241	.272
NUMBER OF RAINSTORMS	ALL RAINSTORMS	620.	373.	213.	132.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	261.	193.	135.	90.
NUMBER OF RAINSTORMS	D >= MEAN	156.	113.	73.	49.
NUMBER OF RAINSTORMS	D >= 2 MEAN	84.	45.	26.	15.

TABLE A134. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ASHEVILLE NC (1903-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.407	.395	.379	.383
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.355	.361	.341	.361
A OF NONDIM. HYETOGRAPH	D >= MEAN	.322	.356	.316	.298
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.279	.319	.228	.158
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.464	.457	.451	.452
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.442	.441	.435	.441
NONDIM. 1ST TIME MOMENT	D >= MEAN	.427	.436	.424	.412
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.406	.413	.378	.339
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.298	.279	.271	.272
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.275	.261	.252	.260
NONDIM. 2ND TIME MOMENT	D >= MEAN	.260	.257	.239	.232
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.239	.235	.195	.171
NUMBER OF RAINSTORMS	ALL RAINSTORMS	2189.	969.	502.	300.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	1026.	576.	313.	208.
NUMBER OF RAINSTORMS	D >= MEAN	616.	321.	170.	111.
NUMBER OF RAINSTORMS	D >= 2 MEAN	286.	113.	63.	23.

TABLE A135. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CAPE HATTERAS NC (1957-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.390	.405	.404	.369
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.361	.379	.371	.336
A OF NONDIM. HYETOGRAPH	D >= MEAN	.328	.346	.390	.390
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.375	.319	.216	.394
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.459	.460	.460	.445
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.445	.447	.446	.431
NONDIM. 1ST TIME MOMENT	D >= MEAN	.430	.436	.451	.450
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.449	.422	.367	.445
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.292	.280	.277	.271
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.279	.266	.261	.255
NONDIM. 2ND TIME MOMENT	D >= MEAN	.264	.253	.266	.273
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.282	.232	.186	.270
NUMBER OF RAINSTORMS	ALL RAINSTORMS	532.	244.	134.	89.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	265.	139.	79.	59.
NUMBER OF RAINSTORMS	D >= MEAN	145.	77.	50.	33.
NUMBER OF RAINSTORMS	D >= 2 MEAN	77.	32.	16.	13.

TABLE A136. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CHARLOTTE AP NC (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.370	.317	.324	.369
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.320	.293	.293	.320
A OF NONDIM. HYETOGRAPH	D >= MEAN	.276	.247	.255	.278
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.288	.236	.115	.259
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.451	.422	.428	.449
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.428	.405	.413	.430
NONDIM. 1ST TIME MOMENT	D >= MEAN	.410	.383	.394	.414
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.411	.376	.305	.406
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.284	.250	.249	.270
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.262	.231	.231	.249
NONDIM. 2ND TIME MOMENT	D >= MEAN	.243	.208	.215	.234
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.244	.199	.141	.213
NUMBER OF RAINSTORMS	ALL RAINSTORMS	680.	337.	171.	104.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	227.	199.	101.	71.
NUMBER OF RAINSTORMS	D >= MEAN	204.	109.	59.	35.
NUMBER OF RAINSTORMS	D >= 2 MEAN	104.	46.	19.	12.

TABLE A137. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION RALEIGH-DUR.AP NC (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.398	.348	.355	.345
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.348	.276	.289	.322
A OF NONDIM. HYETOGRAPH	D >= MEAN	.341	.213	.265	.300
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.336	.161	.168	.219
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.462	.437	.436	.433
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.441	.405	.405	.419
NONDIM. 1ST TIME MOMENT	D >= MEAN	.434	.373	.388	.407
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.430	.345	.352	.362
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.295	.264	.262	.256
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.274	.231	.230	.241
NONDIM. 2ND TIME MOMENT	D >= MEAN	.267	.201	.217	.229
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.264	.178	.175	.194
NUMBER OF RAINSTORMS	ALL RAINSTORMS	662.	321.	197.	99.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	322.	174.	113.	63.
NUMBER OF RAINSTORMS	D >= MEAN	193.	106.	65.	32.
NUMBER OF RAINSTORMS	D >= 2 MEAN	99.	50.	31.	15.

TABLE A138. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WILMINGTON AP NC (1950-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.398	.378	.347	.321
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.331	.361	.313	.265
A OF NONDIM. HYETOGRAPH	D >= MEAN	.323	.343	.269	.249
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.322	.289	.342	.302
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.460	.450	.435	.425
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.432	.437	.419	.397
NONDIM. 1ST TIME MOMENT	D >= MEAN	.424	.427	.398	.398
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.422	.403	.435	.425
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.293	.275	.255	.247
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.265	.260	.236	.218
NONDIM. 2ND TIME MOMENT	D >= MEAN	.258	.252	.215	.213
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.255	.226	.238	.230
NUMBER OF RAINSTORMS	ALL RAINSTORMS	707.	355.	205.	106.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	335.	175.	122.	63.
NUMBER OF RAINSTORMS	D >= MEAN	210.	117.	62.	39.
NUMBER OF RAINSTORMS	D >= 2 MEAN	98.	51.	26.	15.

TABLE A139. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BISMARCK AP ND (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.430	.404	.441	.427
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.392	.354	.416	.405
A OF NONDIM. HYETOGRAPH	D >= MEAN	.363	.263	.394	.294
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.387	.236	.311	.191
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.474	.460	.475	.472
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.460	.438	.464	.464
NONDIM. 1ST TIME MOMENT	D >= MEAN	.449	.400	.452	.422
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.459	.386	.417	.368
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.308	.284	.296	.286
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.293	.258	.279	.276
NONDIM. 2ND TIME MOMENT	D >= MEAN	.282	.221	.270	.240
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.292	.207	.236	.201
NUMBER OF RAINSTORMS	ALL RAINSTORMS	561.	247.	133.	90.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	287.	133.	72.	66.
NUMBER OF RAINSTORMS	D >= MEAN	154.	68.	39.	30.
NUMBER OF RAINSTORMS	D >= 2 MEAN	70.	36.	19.	8.

TABLE A140. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION FARGO AP ND (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.460	.445	.426	.409
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.404	.419	.407	.357
A OF NONDIM. HYETOGRAPH	D >= MEAN	.392	.357	.399	.353
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.320	.339	.402	.359
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.484	.476	.471	.464
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.462	.463	.464	.442
NONDIM. 1ST TIME MOMENT	D >= MEAN	.455	.436	.462	.440
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.429	.417	.462	.432
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.317	.300	.291	.283
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.296	.282	.280	.261
NONDIM. 2ND TIME MOMENT	D >= MEAN	.288	.255	.275	.260
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.262	.242	.281	.256
NUMBER OF RAINSTORMS	ALL RAINSTORMS	573.	326.	163.	99.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	252.	173.	97.	57.
NUMBER OF RAINSTORMS	D >= MEAN	140.	93.	55.	35.
NUMBER OF RAINSTORMS	D >= 2 MEAN	77.	44.	19.	10.

TABLE A141. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CINCINNATI A. OH (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.425	.385	.394	.387
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.365	.314	.358	.344
A OF NONDIM. HYETOGRAPH	D >= MEAN	.361	.286	.292	.276
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.374	.232	.277	.168
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.472	.453	.458	.454
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.448	.424	.442	.437
NONDIM. 1ST TIME MOMENT	D >= MEAN	.444	.410	.413	.410
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.449	.389	.397	.360
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.305	.275	.276	.274
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.281	.243	.259	.256
NONDIM. 2ND TIME MOMENT	D >= MEAN	.278	.231	.234	.224
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.282	.211	.223	.179
NUMBER OF RAINSTORMS	ALL RAINSTORMS	703.	365.	208.	107.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	321.	201.	133.	70.
NUMBER OF RAINSTORMS	D >= MEAN	210.	131.	74.	36.
NUMBER OF RAINSTORMS	D >= 2 MEAN	111.	51.	24.	14.

TABLE A142. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CLEVELAND AP OH (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.417	.391	.415	.405
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.351	.330	.396	.376
A OF NONDIM. HYETOGRAPH	D >= MEAN	.323	.302	.337	.296
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.320	.300	.372	.293
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.468	.456	.463	.462
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.442	.430	.454	.449
NONDIM. 1ST TIME MOMENT	D >= MEAN	.430	.413	.429	.418
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.423	.411	.434	.427
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.301	.279	.286	.282
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.279	.252	.275	.266
NONDIM. 2ND TIME MOMENT	D >= MEAN	.260	.237	.249	.235
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.256	.226	.252	.232
NUMBER OF RAINSTORMS	ALL RAINSTORMS	762.	439.	194.	99.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	401.	254.	126.	61.
NUMBER OF RAINSTORMS	D >= MEAN	229.	144.	68.	32.
NUMBER OF RAINSTORMS	D >= 2 MEAN	101.	54.	20.	12.

TABLE A143. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION COLUMBUS AP OH (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.404	.401	.392	.361
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.365	.363	.328	.330
A OF NONDIM. HYETOGRAPH	D >= MEAN	.341	.309	.325	.243
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.305	.334	.335	.140
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.463	.459	.453	.445
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.445	.442	.427	.430
NONDIM. 1ST TIME MOMENT	D >= MEAN	.434	.416	.422	.391
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.417	.421	.431	.355
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.296	.281	.276	.268
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.279	.261	.249	.252
NONDIM. 2ND TIME MOMENT	D >= MEAN	.267	.235	.243	.213
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.250	.240	.253	.172
NUMBER OF RAINSTORMS	ALL RAINSTORMS	769.	372.	194.	120.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	414.	222.	125.	76.
NUMBER OF RAINSTORMS	D >= MEAN	236.	126.	72.	40.
NUMBER OF RAINSTORMS	D >= 2 MEAN	108.	48.	25.	16.

TABLE A144. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION TOLEDO AP OH (1955-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.395	.387	.372	.380
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.314	.353	.304	.351
A OF NONDIM. HYETOGRAPH	D >= MEAN	.268	.335	.238	.355
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.231	.262	.222	.347
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.459	.455	.445	.450
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.427	.441	.415	.438
NONDIM. 1ST TIME MOMENT	D >= MEAN	.408	.429	.382	.440
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.389	.397	.359	.445
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.293	.278	.269	.272
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.260	.260	.238	.258
NONDIM. 2ND TIME MOMENT	D >= MEAN	.241	.246	.206	.254
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.222	.215	.187	.248
NUMBER OF RAINSTORMS	ALL RAINSTORMS	565.	287.	165.	86.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	274.	177.	94.	56.
NUMBER OF RAINSTORMS	D >= MEAN	166.	94.	47.	32.
NUMBER OF RAINSTORMS	D >= 2 MEAN	81.	35.	18.	6.

TABLE A145. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION YOUNGSTOWN AP OH (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.436	.416	.430	.448
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.397	.374	.404	.419
A OF NONDIM. HYETOGRAPH	D >= MEAN	.377	.360	.376	.369
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.383	.314	.305	.374
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.476	.466	.475	.477
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.461	.448	.465	.466
NONDIM. 1ST TIME MOMENT	D >= MEAN	.452	.442	.453	.445
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.452	.417	.420	.446
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.310	.288	.296	.298
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.294	.267	.283	.284
NONDIM. 2ND TIME MOMENT	D >= MEAN	.285	.260	.271	.264
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.285	.241	.237	.264
NUMBER OF RAINSTORMS	ALL RAINSTORMS	798.	427.	217.	137.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	380.	261.	129.	90.
NUMBER OF RAINSTORMS	D >= MEAN	240.	142.	71.	41.
NUMBER OF RAINSTORMS	D >= 2 MEAN	111.	53.	27.	19.

TABLE A146. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION GREAT SALT P. OK (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.418	.387	.315	.334
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.375	.341	.266	.289
A OF NONDIM. HYETOGRAPH	D >= MEAN	.345	.309	.222	.212
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.270	.266	.244	.089
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.468	.452	.425	.426
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.449	.427	.402	.404
NONDIM. 1ST TIME MOMENT	D >= MEAN	.435	.415	.381	.364
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.408	.399	.391	.295
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.301	.277	.250	.258
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.283	.250	.226	.239
NONDIM. 2ND TIME MOMENT	D >= MEAN	.268	.236	.207	.199
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.241	.227	.216	.140
NUMBER OF RAINSTORMS	ALL RAINSTORMS	380.	216.	156.	63.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	173.	114.	100.	45.
NUMBER OF RAINSTORMS	D >= MEAN	98.	64.	61.	20.
NUMBER OF RAINSTORMS	D >= 2 MEAN	51.	30.	20.	7.

TABLE A147. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION KINGSTON OK (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.377	.339	.325	.389
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.325	.276	.278	.330
A OF NONDIM. HYETOGRAPH	D >= MEAN	.312	.237	.203	.320
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.320	.227	.139	.202
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.452	.429	.426	.445
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.428	.397	.403	.421
NONDIM. 1ST TIME MOMENT	D >= MEAN	.419	.378	.373	.417
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.416	.366	.339	.342
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.285	.256	.249	.267
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.261	.223	.225	.243
NONDIM. 2ND TIME MOMENT	D >= MEAN	.252	.203	.198	.241
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.250	.199	.161	.174
NUMBER OF RAINSTORMS	ALL RAINSTORMS	445.	257.	160.	82.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	194.	147.	97.	62.
NUMBER OF RAINSTORMS	D >= MEAN	125.	92.	51.	35.
NUMBER OF RAINSTORMS	D >= 2 MEAN	64.	43.	22.	7.

TABLE A148. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION OKLAHOMA CITY OK (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.406	.367	.357	.314
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.333	.292	.330	.225
A OF NONDIM. HYETOGRAPH	D >= MEAN	.273	.230	.240	.176
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.240	.260	.255	.209
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.463	.444	.438	.424
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.431	.411	.423	.387
NONDIM. 1ST TIME MOMENT	D >= MEAN	.406	.380	.379	.363
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.389	.396	.391	.384
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.296	.266	.261	.245
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.265	.234	.245	.210
NONDIM. 2ND TIME MOMENT	D >= MEAN	.239	.204	.207	.188
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.223	.217	.206	.203
NUMBER OF RAINSTORMS	ALL RAINSTORMS	496.	267.	153.	113.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	228.	147.	104.	75.
NUMBER OF RAINSTORMS	D >= MEAN	141.	94.	55.	41.
NUMBER OF RAINSTORMS	D >= 2 MEAN	75.	36.	18.	14.

TABLE A149. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION TULSA AP OK (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.414	.370	.319	.322
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.339	.330	.271	.296
A OF NONDIM. HYETOGRAPH	D >= MEAN	.346	.286	.256	.274
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.347	.233	.273	.283
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.467	.445	.427	.426
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.437	.425	.405	.412
NONDIM. 1ST TIME MOMENT	D >= MEAN	.438	.404	.393	.403
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.441	.380	.390	.398
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.300	.270	.251	.253
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.270	.249	.229	.237
NONDIM. 2ND TIME MOMENT	D >= MEAN	.272	.228	.217	.227
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.274	.201	.212	.214
NUMBER OF RAINSTORMS	ALL RAINSTORMS	491.	287.	184.	127.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	207.	165.	112.	81.
NUMBER OF RAINSTORMS	D >= MEAN	138.	95.	68.	46.
NUMBER OF RAINSTORMS	D >= 2 MEAN	85.	43.	22.	12.

TABLE A150. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WOODWARD FD. S.OK (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.394	.326	.364	.347
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.352	.279	.342	.334
A OF NONDIM. HYETOGRAPH	D >= MEAN	.325	.253	.282	.245
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.276	.330	.267	.215
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.458	.427	.444	.441
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.438	.404	.431	.434
NONDIM. 1ST TIME MOMENT	D >= MEAN	.425	.393	.406	.396
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.407	.418	.392	.385
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.292	.257	.266	.263
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.271	.233	.254	.251
NONDIM. 2ND TIME MOMENT	D >= MEAN	.258	.222	.229	.215
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.240	.243	.214	.200
NUMBER OF RAINSTORMS	ALL RAINSTORMS	406.	237.	126.	70.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	192.	134.	83.	47.
NUMBER OF RAINSTORMS	D >= MEAN	118.	81.	49.	24.
NUMBER OF RAINSTORMS	D >= 2 MEAN	57.	34.	14.	11.

TABLE A151. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ASTORIA AP OR (1953-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.481	.488	.479	.507
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.475	.486	.478	.507
A OF NONDIM. HYETOGRAPH	D >= MEAN	.464	.482	.465	.506
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.455	.466	.530	.498
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.493	.496	.493	.502
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.491	.496	.493	.502
NONDIM. 1ST TIME MOMENT	D >= MEAN	.487	.495	.488	.501
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.482	.488	.510	.499
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.327	.324	.317	.324
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.324	.322	.315	.322
NONDIM. 2ND TIME MOMENT	D >= MEAN	.320	.319	.306	.319
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.316	.312	.321	.313
NUMBER OF RAINSTORMS	ALL RAINSTORMS	2503.	1241.	820.	512.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	1884.	873.	597.	404.
NUMBER OF RAINSTORMS	D >= MEAN	843.	430.	292.	193.
NUMBER OF RAINSTORMS	D >= 2 MEAN	238.	118.	74.	37.

TABLE A152. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BANDON OR (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.464	.484	.480	.488
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.453	.483	.472	.479
A OF NONDIM. HYETOGRAPH	D >= MEAN	.443	.482	.458	.461
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.415	.418	.449	.437
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.487	.494	.494	.495
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.484	.494	.491	.492
NONDIM. 1ST TIME MOMENT	D >= MEAN	.479	.492	.487	.486
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.468	.469	.482	.473
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.321	.321	.319	.319
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.317	.319	.315	.314
NONDIM. 2ND TIME MOMENT	D >= MEAN	.312	.314	.306	.303
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.301	.284	.297	.283
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1996.	1191.	725.	475.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	1541.	765.	530.	363.
NUMBER OF RAINSTORMS	D >= MEAN	575.	370.	263.	179.
NUMBER OF RAINSTORMS	D >= 2 MEAN	165.	111.	61.	40.

TABLE A153. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BURNS CI OR (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.463	.504	.425	.466
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.431	.504	.406	.436
A OF NONDIM. HYETOGRAPH	D >= MEAN	.353	.494	.374	.344
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.297	.396	.282	.348
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.486	.499	.470	.487
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.475	.498	.462	.476
NONDIM. 1ST TIME MOMENT	D >= MEAN	.446	.489	.447	.443
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.421	.447	.402	.436
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.320	.325	.298	.309
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.308	.321	.287	.297
NONDIM. 2ND TIME MOMENT	D >= MEAN	.280	.308	.268	.265
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.254	.273	.221	.257
NUMBER OF RAINSTORMS	ALL RAINSTORMS	332.	140.	86.	56.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	205.	93.	56.	42.
NUMBER OF RAINSTORMS	D >= MEAN	92.	42.	31.	23.
NUMBER OF RAINSTORMS	D >= 2 MEAN	30.	15.	8.	4.

TABLE A154. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION EUGENE AP OR (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.461	.466	.450	.443
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.444	.458	.442	.443
A OF NONDIM. HYETOGRAPH	D >= MEAN	.435	.455	.440	.433
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.423	.457	.447	.392
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.486	.487	.483	.479
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.480	.484	.480	.479
NONDIM. 1ST TIME MOMENT	D >= MEAN	.476	.481	.478	.474
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.468	.482	.480	.456
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.319	.313	.308	.303
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.313	.309	.303	.301
NONDIM. 2ND TIME MOMENT	D >= MEAN	.309	.304	.298	.294
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.302	.300	.295	.272
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1795.	963.	638.	372.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	1083.	718.	499.	290.
NUMBER OF RAINSTORMS	D >= MEAN	543.	336.	218.	135.
NUMBER OF RAINSTORMS	D >= 2 MEAN	174.	102.	55.	32.

TABLE A155. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION LAKEVIEW OR (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.453	.459	.447	.446
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.434	.442	.431	.431
A OF NONDIM. HYETOGRAPH	D >= MEAN	.394	.374	.391	.417
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.371	.320	.462	.554
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.483	.485	.481	.481
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.476	.478	.475	.475
NONDIM. 1ST TIME MOMENT	D >= MEAN	.460	.453	.460	.472
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.446	.434	.488	.518
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.316	.312	.305	.299
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.309	.304	.298	.291
NONDIM. 2ND TIME MOMENT	D >= MEAN	.293	.276	.279	.277
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.279	.256	.311	.325
NUMBER OF RAINSTORMS	ALL RAINSTORMS	400.	179.	109.	61.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	287.	105.	88.	54.
NUMBER OF RAINSTORMS	D >= MEAN	110.	57.	41.	22.
NUMBER OF RAINSTORMS	D >= 2 MEAN	40.	21.	7.	3.

TABLE A156. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MEDFORD AP OR (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.424	.469	.429	.474
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.374	.453	.413	.439
A OF NONDIM. HYETOGRAPH	D >= MEAN	.364	.384	.389	.490
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.295	.344	.531	.632
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.472	.487	.472	.491
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.453	.480	.465	.479
NONDIM. 1ST TIME MOMENT	D >= MEAN	.445	.450	.449	.497
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.415	.425	.496	.544
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.306	.313	.293	.308
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.287	.302	.283	.295
NONDIM. 2ND TIME MOMENT	D >= MEAN	.279	.271	.270	.312
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.248	.244	.325	.354
NUMBER OF RAINSTORMS	ALL RAINSTORMS	319.	167.	104.	43.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	177.	108.	74.	33.
NUMBER OF RAINSTORMS	D >= MEAN	90.	52.	33.	18.
NUMBER OF RAINSTORMS	D >= 2 MEAN	39.	12.	9.	1.

TABLE A157. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PENDLETON OR (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.453	.461	.413	.438
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.435	.455	.416	.429
A OF NONDIM. HYETOGRAPH	D >= MEAN	.387	.428	.439	.369
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.315	.506	.374	.251
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.483	.486	.471	.478
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.476	.483	.472	.475
NONDIM. 1ST TIME MOMENT	D >= MEAN	.457	.470	.481	.454
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.427	.496	.474	.408
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.316	.313	.293	.299
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.309	.307	.291	.295
NONDIM. 2ND TIME MOMENT	D >= MEAN	.291	.292	.299	.270
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.261	.313	.289	.227
NUMBER OF RAINSTORMS	ALL RAINSTORMS	334.	178.	107.	61.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	198.	121.	85.	53.
NUMBER OF RAINSTORMS	D >= MEAN	89.	53.	45.	23.
NUMBER OF RAINSTORMS	D >= 2 MEAN	39.	15.	8.	5.

TABLE A158. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PORTLAND AP OR (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.464	.478	.459	.475
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.450	.473	.453	.478
A OF NONDIM. HYETOGRAPH	D >= MEAN	.417	.463	.448	.479
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.405	.442	.408	.462
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.487	.492	.485	.492
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.482	.490	.483	.493
NONDIM. 1ST TIME MOMENT	D >= MEAN	.470	.486	.480	.492
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.462	.478	.466	.486
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.320	.319	.310	.314
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.316	.316	.306	.313
NONDIM. 2ND TIME MOMENT	D >= MEAN	.303	.310	.302	.309
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.295	.297	.286	.307
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1995.	996.	688.	429.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	1450.	772.	552.	353.
NUMBER OF RAINSTORMS	D >= MEAN	664.	353.	260.	166.
NUMBER OF RAINSTORMS	D >= 2 MEAN	174.	86.	50.	35.

TABLE A159. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ALLENTOWN AP PA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.408	.428	.423	.430
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.348	.412	.406	.390
A OF NONDIM. HYETOGRAPH	D >= MEAN	.320	.394	.366	.346
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.316	.355	.273	.334
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.464	.473	.467	.469
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.439	.466	.456	.453
NONDIM. 1ST TIME MOMENT	D >= MEAN	.425	.459	.438	.431
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.420	.445	.397	.439
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.297	.296	.290	.290
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.272	.285	.277	.271
NONDIM. 2ND TIME MOMENT	D >= MEAN	.258	.277	.261	.251
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.253	.268	.218	.244
NUMBER OF RAINSTORMS	ALL RAINSTORMS	719.	378.	220.	125.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	337.	212.	121.	84.
NUMBER OF RAINSTORMS	D >= MEAN	201.	116.	75.	42.
NUMBER OF RAINSTORMS	D >= 2 MEAN	97.	52.	33.	13.

TABLE A160. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ERIE AP PA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.398	.406	.409	.401
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.348	.358	.396	.391
A OF NONDIM. HYETOGRAPH	D >= MEAN	.318	.342	.330	.396
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.289	.371	.376	.334
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.461	.464	.465	.462
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.438	.446	.458	.457
NONDIM. 1ST TIME MOMENT	D >= MEAN	.426	.444	.430	.454
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.411	.452	.444	.418
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.294	.287	.284	.283
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.272	.265	.272	.274
NONDIM. 2ND TIME MOMENT	D >= MEAN	.259	.263	.246	.275
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.245	.274	.260	.238
NUMBER OF RAINSTORMS	ALL RAINSTORMS	590.	297.	182.	107.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	303.	162.	105.	74.
NUMBER OF RAINSTORMS	D >= MEAN	174.	102.	52.	33.
NUMBER OF RAINSTORMS	D >= 2 MEAN	81.	37.	28.	16.

TABLE A161. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION HARRISBURG PA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.421	.424	.407	.403
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.362	.379	.351	.391
A OF NONDIM. HYETOGRAPH	D >= MEAN	.308	.346	.314	.321
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.289	.246	.366	.305
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.469	.466	.464	.462
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.444	.444	.443	.456
NONDIM. 1ST TIME MOMENT	D >= MEAN	.421	.428	.428	.425
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.411	.380	.445	.411
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.302	.288	.285	.284
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.277	.262	.259	.275
NONDIM. 2ND TIME MOMENT	D >= MEAN	.254	.245	.247	.246
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.244	.203	.264	.237
NUMBER OF RAINSTORMS	ALL RAINSTORMS	739.	328.	201.	119.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	355.	175.	117.	74.
NUMBER OF RAINSTORMS	D >= MEAN	218.	103.	60.	39.
NUMBER OF RAINSTORMS	D >= 2 MEAN	103.	48.	23.	11.

TABLE A162. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION JOHNSTOWN PA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.380	.365	.389	.393
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.332	.326	.335	.360
A OF NONDIM. HYETOGRAPH	D >= MEAN	.297	.295	.299	.344
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.227	.279	.262	.272
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.453	.443	.453	.453
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.432	.423	.429	.437
NONDIM. 1ST TIME MOMENT	D >= MEAN	.415	.403	.409	.423
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.381	.392	.391	.381
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.287	.268	.276	.276
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.265	.247	.251	.259
NONDIM. 2ND TIME MOMENT	D >= MEAN	.248	.229	.233	.245
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.214	.215	.219	.210
NUMBER OF RAINSTORMS	ALL RAINSTORMS	769.	464.	282.	171.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	424.	259.	170.	119.
NUMBER OF RAINSTORMS	D >= MEAN	223.	125.	93.	62.
NUMBER OF RAINSTORMS	D >= 2 MEAN	94.	60.	40.	18.

TABLE A163. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PHILADELPHIA PA (1900-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.432	.397	.406	.394
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.394	.351	.364	.359
A OF NONDIM. HYETOGRAPH	D >= MEAN	.377	.327	.325	.328
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.377	.346	.271	.309
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.474	.458	.462	.457
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.458	.437	.444	.442
NONDIM. 1ST TIME MOMENT	D >= MEAN	.450	.426	.425	.423
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.449	.432	.400	.403
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.307	.281	.282	.275
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.291	.256	.261	.258
NONDIM. 2ND TIME MOMENT	D >= MEAN	.283	.245	.245	.242
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.282	.250	.221	.228
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1693.	815.	508.	314.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	798.	428.	288.	197.
NUMBER OF RAINSTORMS	D >= MEAN	479.	260.	169.	109.
NUMBER OF RAINSTORMS	D >= 2 MEAN	244.	116.	73.	37.

TABLE A164. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PITTSBURGH CI PA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.433	.432	.376	.449
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.396	.418	.361	.399
A OF NONDIM. HYETOGRAPH	D >= MEAN	.398	.401	.340	.325
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.434	.349	.352	.455
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.475	.472	.448	.474
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.459	.464	.439	.452
NONDIM. 1ST TIME MOMENT	D >= MEAN	.458	.455	.428	.421
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.471	.432	.422	.478
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.308	.296	.273	.296
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.293	.285	.262	.273
NONDIM. 2ND TIME MOMENT	D >= MEAN	.291	.272	.252	.244
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.305	.246	.249	.297
NUMBER OF RAINSTORMS	ALL RAINSTORMS	833.	388.	213.	114.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	441.	222.	140.	75.
NUMBER OF RAINSTORMS	D >= MEAN	265.	113.	75.	42.
NUMBER OF RAINSTORMS	D >= 2 MEAN	114.	53.	20.	16.

TABLE A165. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SMETHPORT PA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.408	.415	.427	.407
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.356	.381	.396	.397
A OF NONDIM. HYETOGRAPH	D >= MEAN	.322	.334	.374	.376
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.294	.321	.368	.287
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.464	.464	.469	.465
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.442	.448	.454	.460
NONDIM. 1ST TIME MOMENT	D >= MEAN	.425	.428	.445	.451
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.411	.423	.440	.425
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.297	.289	.293	.287
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.275	.269	.277	.280
NONDIM. 2ND TIME MOMENT	D >= MEAN	.259	.249	.265	.270
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.245	.244	.257	.244
NUMBER OF RAINSTORMS	ALL RAINSTORMS	742.	474.	263.	147.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	399.	277.	147.	96.
NUMBER OF RAINSTORMS	D >= MEAN	214.	144.	93.	50.
NUMBER OF RAINSTORMS	D >= 2 MEAN	102.	67.	32.	13.

TABLE A166. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION W-BARRE-SCRAN. PA (1964-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.455	.442	.404	.448
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.435	.423	.391	.417
A OF NONDIM. HYETOGRAPH	D >= MEAN	.439	.434	.397	.348
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.365	.356	.485	.304
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.483	.477	.464	.481
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.474	.469	.458	.470
NONDIM. 1ST TIME MOMENT	D >= MEAN	.473	.473	.462	.442
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.442	.440	.497	.427
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.316	.298	.283	.299
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.308	.285	.274	.288
NONDIM. 2ND TIME MOMENT	D >= MEAN	.307	.284	.279	.251
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.275	.248	.297	.241
NUMBER OF RAINSTORMS	ALL RAINSTORMS	404.	209.	113.	74.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	221.	119.	72.	47.
NUMBER OF RAINSTORMS	D >= MEAN	133.	67.	38.	27.
NUMBER OF RAINSTORMS	D >= 2 MEAN	59.	28.	10.	8.

TABLE A167. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WILLIAMSPORT PA (1950-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.392	.378	.399	.374
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.336	.306	.364	.368
A OF NONDIM. HYETOGRAPH	D >= MEAN	.267	.290	.306	.310
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.270	.260	.265	.299
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.459	.447	.458	.452
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.436	.412	.441	.447
NONDIM. 1ST TIME MOMENT	D >= MEAN	.406	.404	.418	.424
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.403	.390	.398	.419
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.292	.273	.282	.277
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.269	.240	.263	.269
NONDIM. 2ND TIME MOMENT	D >= MEAN	.240	.231	.243	.248
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.237	.217	.226	.241
NUMBER OF RAINSTORMS	ALL RAINSTORMS	705.	369.	231.	152.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	369.	185.	143.	100.
NUMBER OF RAINSTORMS	D >= MEAN	202.	110.	82.	49.
NUMBER OF RAINSTORMS	D >= 2 MEAN	85.	56.	26.	18.

TABLE A168. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BLOCK ISLAND RI (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.457	.426	.454	.474
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.426	.437	.446	.457
A OF NONDIM. HYETOGRAPH	D >= MEAN	.389	.416	.464	.415
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.357	.461	.438	.408
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.484	.472	.485	.489
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.472	.476	.483	.482
NONDIM. 1ST TIME MOMENT	D >= MEAN	.458	.466	.488	.462
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.445	.483	.478	.461
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.317	.298	.305	.310
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.305	.295	.301	.298
NONDIM. 2ND TIME MOMENT	D >= MEAN	.291	.283	.301	.278
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.278	.296	.279	.270
NUMBER OF RAINSTORMS	ALL RAINSTORMS	500.	271.	194.	118.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	247.	147.	118.	75.
NUMBER OF RAINSTORMS	D >= MEAN	133.	81.	69.	43.
NUMBER OF RAINSTORMS	D >= 2 MEAN	69.	33.	19.	14.

TABLE A169. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PROVIDENCE AP RI (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.425	.427	.421	.463
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.380	.382	.411	.434
A OF NONDIM. HYETOGRAPH	D >= MEAN	.358	.362	.436	.391
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.330	.371	.458	.349
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.471	.468	.472	.485
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.451	.447	.469	.475
NONDIM. 1ST TIME MOMENT	D >= MEAN	.439	.435	.479	.456
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.425	.438	.478	.437
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.304	.291	.290	.305
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.284	.267	.281	.292
NONDIM. 2ND TIME MOMENT	D >= MEAN	.272	.256	.286	.273
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.259	.262	.279	.265
NUMBER OF RAINSTORMS	ALL RAINSTORMS	591.	295.	194.	128.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	277.	154.	122.	82.
NUMBER OF RAINSTORMS	D >= MEAN	162.	93.	67.	44.
NUMBER OF RAINSTORMS	D >= 2 MEAN	71.	36.	21.	13.

TABLE A170. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CHARLESTON CI SC (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.417	.351	.304	.366
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.402	.312	.292	.324
A OF NONDIM. HYETOGRAPH	D >= MEAN	.383	.287	.270	.307
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.348	.307	.359	.393
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.468	.435	.417	.443
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.459	.414	.406	.422
NONDIM. 1ST TIME MOMENT	D >= MEAN	.451	.399	.391	.408
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.436	.409	.423	.439
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.301	.263	.239	.265
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.292	.243	.226	.242
NONDIM. 2ND TIME MOMENT	D >= MEAN	.284	.228	.210	.230
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.269	.239	.235	.245
NUMBER OF RAINSTORMS	ALL RAINSTORMS	699.	357.	177.	114.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	349.	208.	111.	73.
NUMBER OF RAINSTORMS	D >= MEAN	205.	127.	62.	49.
NUMBER OF RAINSTORMS	D >= 2 MEAN	91.	44.	21.	12.

TABLE A171. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA AT STATION COLUMBIA SC (1954-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.387	.394	.362	.389
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.304	.342	.320	.340
A OF NONDIM. HYETOGRAPH	D >= MEAN	.290	.336	.273	.346
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.322	.320	.220	.273
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.456	.457	.439	.450
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.420	.435	.419	.429
NONDIM. 1ST TIME MOMENT	D >= MEAN	.411	.431	.394	.428
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.424	.416	.364	.405
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.289	.279	.260	.267
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.254	.254	.236	.242
NONDIM. 2ND TIME MOMENT	D >= MEAN	.245	.252	.210	.239
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.257	.234	.181	.217
NUMBER OF RAINSTORMS	ALL RAINSTORMS	584.	263.	145.	88.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	250.	142.	77.	64.
NUMBER OF RAINSTORMS	D >= MEAN	155.	85.	49.	30.
NUMBER OF RAINSTORMS	D >= 2 MEAN	75.	32.	23.	9.

TABLE A172. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA AT STATION GREENVILLE-SPA.SC (1963-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.372	.429	.407	.353
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.315	.414	.409	.329
A OF NONDIM. HYETOGRAPH	D >= MEAN	.303	.399	.351	.301
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.195	.340	.309	.185
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.449	.468	.463	.441
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.422	.459	.462	.427
NONDIM. 1ST TIME MOMENT	D >= MEAN	.415	.447	.441	.408
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.364	.425	.418	.334
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.232	.291	.282	.262
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.256	.276	.278	.244
NONDIM. 2ND TIME MOMENT	D >= MEAN	.248	.264	.255	.231
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.198	.233	.236	.170
NUMBER OF RAINSTORMS	ALL RAINSTORMS	386.	143.	99.	56.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	188.	79.	61.	36.
NUMBER OF RAINSTORMS	D >= MEAN	118.	51.	39.	20.
NUMBER OF RAINSTORMS	D >= 2 MEAN	54.	20.	10.	7.

TABLE A173. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ABERDEEN AP SD (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.429	.407	.386	.402
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.376	.395	.333	.377
A OF NONDIM. HYETOGRAPH	D >= MEAN	.365	.387	.257	.282
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.352	.379	.168	.142
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.472	.465	.448	.462
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.450	.459	.422	.451
NONDIM. 1ST TIME MOMENT	D >= MEAN	.443	.452	.382	.413
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.433	.448	.323	.356
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.306	.287	.274	.280
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.283	.276	.244	.265
NONDIM. 2ND TIME MOMENT	D >= MEAN	.277	.271	.208	.232
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.266	.266	.162	.176
NUMBER OF RAINSTORMS	ALL RAINSTORMS	548.	263.	138.	93.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	267.	146.	79.	61.
NUMBER OF RAINSTORMS	D >= MEAN	145.	85.	44.	32.
NUMBER OF RAINSTORMS	D >= 2 MEAN	65.	33.	17.	11.

TABLE A174. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION RAPID CITY AP SD (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.424	.435	.445	.421
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.375	.421	.398	.397
A OF NONDIM. HYETOGRAPH	D >= MEAN	.340	.389	.374	.340
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.273	.376	.243	.181
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.470	.475	.478	.466
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.450	.469	.460	.454
NONDIM. 1ST TIME MOMENT	D >= MEAN	.434	.455	.447	.424
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.406	.452	.380	.333
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.304	.300	.298	.292
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.284	.291	.276	.281
NONDIM. 2ND TIME MOMENT	D >= MEAN	.268	.278	.268	.252
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.239	.273	.206	.173
NUMBER OF RAINSTORMS	ALL RAINSTORMS	621.	241.	140.	80.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	315.	140.	82.	49.
NUMBER OF RAINSTORMS	D >= MEAN	178.	75.	46.	28.
NUMBER OF RAINSTORMS	D >= 2 MEAN	77.	32.	9.	8.

TABLE A175. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SIOUX FALLS AP SD (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.429	.408	.409	.381
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.389	.360	.379	.373
A OF NONDIM. HYETOGRAPH	D >= MEAN	.336	.329	.332	.302
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.288	.234	.270	.191
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.472	.462	.462	.452
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.455	.440	.448	.446
NONDIM. 1ST TIME MOMENT	D >= MEAN	.434	.425	.429	.416
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.411	.391	.394	.367
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.306	.283	.285	.270
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.288	.258	.270	.266
NONDIM. 2ND TIME MOMENT	D >= MEAN	.267	.243	.251	.243
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.245	.210	.221	.222
NUMBER OF RAINSTORMS	ALL RAINSTORMS	586.	306.	194.	102.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	276.	169.	126.	64.
NUMBER OF RAINSTORMS	D >= MEAN	164.	96.	65.	33.
NUMBER OF RAINSTORMS	D >= 2 MEAN	82.	39.	25.	8.

TABLE A176. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BRISTOL AP TN (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.381	.373	.329	.386
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.329	.330	.290	.374
A OF NONDIM. HYETOGRAPH	D >= MEAN	.278	.288	.251	.324
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.229	.236	.158	.314
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.453	.447	.431	.453
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.430	.426	.411	.444
NONDIM. 1ST TIME MOMENT	D >= MEAN	.408	.406	.397	.420
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.384	.373	.346	.416
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.286	.272	.254	.274
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.263	.251	.233	.264
NONDIM. 2ND TIME MOMENT	D >= MEAN	.241	.234	.220	.243
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.217	.204	.170	.242
NUMBER OF RAINSTORMS	ALL RAINSTORMS	765.	381.	192.	120.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	394.	224.	121.	76.
NUMBER OF RAINSTORMS	D >= MEAN	230.	130.	75.	47.
NUMBER OF RAINSTORMS	D >= 2 MEAN	93.	43.	26.	15.

TABLE A177. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CHATTANOOGA TN (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.377	.349	.340	.339
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.328	.302	.299	.322
A OF NONDIM. HYETOGRAPH	D >= MEAN	.304	.310	.271	.270
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.276	.324	.180	.368
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.453	.435	.428	.439
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.431	.411	.406	.427
NONDIM. 1ST TIME MOMENT	D >= MEAN	.420	.407	.387	.401
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.406	.408	.333	.442
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.286	.261	.250	.257
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.264	.236	.227	.244
NONDIM. 2ND TIME MOMENT	D >= MEAN	.253	.230	.212	.220
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.239	.227	.167	.260
NUMBER OF RAINSTORMS	ALL RAINSTORMS	754.	345.	166.	100.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	381.	190.	101.	65.
NUMBER OF RAINSTORMS	D >= MEAN	233.	104.	65.	41.
NUMBER OF RAINSTORMS	D >= 2 MEAN	108.	42.	20.	12.

TABLE A178. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION KNOXVILLE AP TN (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.416	.387	.375	.407
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.374	.341	.309	.369
A OF NONDIM. HYETOGRAPH	D >= MEAN	.355	.329	.293	.376
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.331	.380	.234	.317
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.467	.451	.449	.465
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.449	.431	.422	.450
NONDIM. 1ST TIME MOMENT	D >= MEAN	.440	.422	.414	.451
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.429	.448	.384	.436
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.301	.276	.272	.283
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.283	.253	.244	.267
NONDIM. 2ND TIME MOMENT	D >= MEAN	.274	.245	.236	.264
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.262	.270	.209	.245
NUMBER OF RAINSTORMS	ALL RAINSTORMS	782.	305.	202.	105.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	399.	176.	126.	77.
NUMBER OF RAINSTORMS	D >= MEAN	246.	113.	71.	46.
NUMBER OF RAINSTORMS	D >= 2 MEAN	113.	45.	24.	8.

TABLE A179. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MEMPHIS AP TN (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.380	.330	.303	.338
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.316	.280	.230	.251
A OF NONDIM. HYETOGRAPH	D >= MEAN	.279	.277	.254	.190
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.258	.235	.188	.135
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.453	.426	.415	.430
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.424	.401	.380	.393
NONDIM. 1ST TIME MOMENT	D >= MEAN	.409	.396	.384	.361
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.400	.373	.355	.336
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.286	.247	.236	.250
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.258	.221	.202	.211
NONDIM. 2ND TIME MOMENT	D >= MEAN	.242	.215	.208	.183
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.233	.194	.182	.159
NUMBER OF RAINSTORMS	ALL RAINSTORMS	524.	318.	203.	86.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	243.	181.	126.	59.
NUMBER OF RAINSTORMS	D >= MEAN	154.	112.	73.	32.
NUMBER OF RAINSTORMS	D >= 2 MEAN	81.	42.	22.	11.

TABLE A180. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION NASHVILLE AP TN (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.384	.365	.362	.324
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.336	.345	.319	.276
A OF NONDIM. HYETOGRAPH	D >= MEAN	.327	.305	.307	.214
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.351	.287	.216	.257
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.456	.445	.439	.427
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.435	.433	.420	.406
NONDIM. 1ST TIME MOMENT	D >= MEAN	.431	.415	.417	.376
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.437	.403	.368	.407
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.289	.273	.261	.248
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.269	.259	.240	.224
NONDIM. 2ND TIME MOMENT	D >= MEAN	.264	.239	.233	.200
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.270	.226	.188	.220
NUMBER OF RAINSTORMS	ALL RAINSTORMS	691.	315.	183.	114.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	351.	178.	125.	78.
NUMBER OF RAINSTORMS	D >= MEAN	217.	106.	70.	37.
NUMBER OF RAINSTORMS	D >= 2 MEAN	96.	46.	19.	11.

TABLE A181. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ABILENE AP TX (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.400	.360	.355	.275
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.379	.320	.284	.214
A OF NONDIM. HYETOGRAPH	D >= MEAN	.376	.316	.226	.162
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.306	.353	.322	.145
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.463	.442	.438	.402
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.453	.422	.404	.374
NONDIM. 1ST TIME MOMENT	D >= MEAN	.452	.417	.377	.352
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.425	.437	.413	.352
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.296	.267	.256	.231
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.286	.245	.221	.205
NONDIM. 2ND TIME MOMENT	D >= MEAN	.285	.239	.198	.186
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.258	.258	.231	.176
NUMBER OF RAINSTORMS	ALL RAINSTORMS	388.	226.	114.	74.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	187.	124.	66.	50.
NUMBER OF RAINSTORMS	D >= MEAN	121.	82.	40.	29.
NUMBER OF RAINSTORMS	D >= 2 MEAN	61.	32.	18.	11.

TABLE A182. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION AMARILLO AP TX (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.388	.362	.342	.316
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.336	.334	.258	.247
A OF NONDIM. HYETOGRAPH	D >= MEAN	.328	.330	.225	.176
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.323	.267	.240	.161
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.456	.442	.433	.425
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.433	.426	.399	.394
NONDIM. 1ST TIME MOMENT	D >= MEAN	.430	.422	.383	.353
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.429	.400	.378	.330
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.290	.265	.254	.251
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.267	.246	.217	.222
NONDIM. 2ND TIME MOMENT	D >= MEAN	.264	.239	.202	.188
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.263	.216	.201	.170
NUMBER OF RAINSTORMS	ALL RAINSTORMS	479.	220.	121.	66.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	231.	120.	77.	43.
NUMBER OF RAINSTORMS	D >= MEAN	146.	76.	43.	20.
NUMBER OF RAINSTORMS	D >= 2 MEAN	67.	28.	20.	9.

TABLE A183. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION AUSTIN AP TX (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.427	.358	.314	.285
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.415	.331	.261	.260
A OF NONDIM. HYETOGRAPH	D >= MEAN	.380	.325	.208	.205
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.367	.268	.245	.212
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.473	.441	.422	.415
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.466	.424	.394	.401
NONDIM. 1ST TIME MOMENT	D >= MEAN	.454	.416	.360	.375
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.448	.390	.390	.389
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.306	.262	.242	.227
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.300	.242	.212	.212
NONDIM. 2ND TIME MOMENT	D >= MEAN	.288	.234	.181	.188
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.281	.218	.203	.194
NUMBER OF RAINSTORMS	ALL RAINSTORMS	432.	180.	113.	78.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	201.	97.	68.	51.
NUMBER OF RAINSTORMS	D >= MEAN	128.	67.	38.	34.
NUMBER OF RAINSTORMS	D >= 2 MEAN	62.	29.	15.	13.

TABLE A184. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BROWNSVILLE AP TX (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.393	.380	.291	.338
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.361	.338	.254	.294
A OF NONDIM. HYETOGRAPH	D >= MEAN	.339	.359	.270	.241
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.341	.409	.207	.124
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.457	.445	.417	.432
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.441	.422	.401	.412
NONDIM. 1ST TIME MOMENT	D >= MEAN	.431	.433	.402	.389
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.430	.453	.382	.316
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.291	.271	.234	.253
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.274	.244	.216	.231
NONDIM. 2ND TIME MOMENT	D >= MEAN	.265	.248	.215	.208
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.263	.263	.196	.151
NUMBER OF RAINSTORMS	ALL RAINSTORMS	405.	168.	94.	71.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	194.	93.	61.	45.
NUMBER OF RAINSTORMS	D >= MEAN	124.	50.	31.	27.
NUMBER OF RAINSTORMS	D >= 2 MEAN	56.	20.	14.	8.

TABLE A185. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CORPUS CHRISTI TX (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.409	.398	.345	.338
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.356	.362	.335	.273
A OF NONDIM. HYETOGRAPH	D >= MEAN	.367	.372	.292	.320
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.372	.372	.256	.421
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.462	.457	.439	.433
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.438	.442	.431	.405
NONDIM. 1ST TIME MOMENT	D >= MEAN	.441	.444	.410	.424
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.444	.444	.402	.472
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.295	.280	.264	.250
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.271	.262	.252	.221
NONDIM. 2ND TIME MOMENT	D >= MEAN	.275	.259	.231	.234
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.278	.247	.218	.259
NUMBER OF RAINSTORMS	ALL RAINSTORMS	384.	209.	121.	69.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	185.	116.	75.	39.
NUMBER OF RAINSTORMS	D >= MEAN	112.	76.	43.	25.
NUMBER OF RAINSTORMS	D >= 2 MEAN	59.	30.	15.	10.

TABLE A186. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION DEL RIO AP TX (1964-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.409	.357	.263	.329
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.378	.293	.203	.225
A OF NONDIM. HYETOGRAPH	D >= MEAN	.345	.282	.246	.257
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.413	.344	.235	.360
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.463	.439	.401	.427
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.445	.408	.374	.365
NONDIM. 1ST TIME MOMENT	D >= MEAN	.430	.395	.389	.377
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.455	.420	.349	.441
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.296	.266	.226	.248
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.279	.228	.194	.195
NONDIM. 2ND TIME MOMENT	D >= MEAN	.263	.216	.206	.200
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.288	.232	.183	.248
NUMBER OF RAINSTORMS	ALL RAINSTORMS	184.	85.	52.	21.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	81.	46.	31.	8.
NUMBER OF RAINSTORMS	D >= MEAN	48.	32.	20.	7.
NUMBER OF RAINSTORMS	D >= 2 MEAN	28.	10.	7.	5.

TABLE A187. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION EL PASO AP TX (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.370	.384	.251	.349
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.317	.332	.183	.331
A OF NONDIM. HYETOGRAPH	D >= MEAN	.343	.311	.217	.338
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.360	.355	.685	.464
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.451	.458	.396	.426
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.429	.438	.365	.418
NONDIM. 1ST TIME MOMENT	D >= MEAN	.438	.433	.376	.431
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.442	.458	.587	.460
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.285	.281	.232	.249
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.263	.257	.200	.237
NONDIM. 2ND TIME MOMENT	D >= MEAN	.272	.251	.213	.238
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.275	.281	.418	.267
NUMBER OF RAINSTORMS	ALL RAINSTORMS	240.	93.	45.	26.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	126.	50.	31.	15.
NUMBER OF RAINSTORMS	D >= MEAN	73.	27.	19.	9.
NUMBER OF RAINSTORMS	D >= 2 MEAN	32.	13.	3.	5.

TABLE A188. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION GALVESTON CI TX (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.401	.406	.317	.313
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.363	.364	.280	.299
A OF NONDIM. HYETOGRAPH	D >= MEAN	.346	.331	.256	.250
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.297	.362	.206	.299
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.460	.456	.425	.415
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.441	.436	.407	.404
NONDIM. 1ST TIME MOMENT	D >= MEAN	.433	.417	.393	.384
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.414	.431	.379	.419
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.293	.280	.242	.238
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.274	.257	.223	.226
NONDIM. 2ND TIME MOMENT	D >= MEAN	.266	.236	.211	.210
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.248	.245	.192	.226
NUMBER OF RAINSTORMS	ALL RAINSTORMS	459.	218.	121.	75.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	233.	122.	85.	53.
NUMBER OF RAINSTORMS	D >= MEAN	132.	78.	50.	27.
NUMBER OF RAINSTORMS	D >= 2 MEAN	58.	33.	14.	7.

TABLE A189. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION LUBBOCK AP TX (1958-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.377	.332	.299	.338
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.327	.258	.217	.275
A OF NONDIM. HYETOGRAPH	D >= MEAN	.291	.204	.160	.246
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.268	.221	.161	.219
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.452	.429	.412	.433
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.428	.396	.374	.407
NONDIM. 1ST TIME MOMENT	D >= MEAN	.411	.366	.342	.394
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.402	.368	.349	.387
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.285	.253	.240	.259
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.261	.221	.203	.230
NONDIM. 2ND TIME MOMENT	D >= MEAN	.244	.193	.177	.221
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.235	.190	.181	.196
NUMBER OF RAINSTORMS	ALL RAINSTORMS	262.	140.	82.	46.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	126.	80.	51.	30.
NUMBER OF RAINSTORMS	D >= MEAN	82.	42.	28.	20.
NUMBER OF RAINSTORMS	D >= 2 MEAN	45.	18.	9.	6.

TABLE A190. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MIDLAND AP TX (1954-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.339	.348	.336	.394
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.272	.305	.281	.307
A OF NONDIM. HYETOGRAPH	D >= MEAN	.227	.319	.238	.251
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.206	.248	.198	.241
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.439	.435	.428	.455
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.411	.411	.402	.418
NONDIM. 1ST TIME MOMENT	D >= MEAN	.391	.412	.386	.392
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.381	.374	.349	.371
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.272	.261	.254	.273
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.244	.235	.228	.229
NONDIM. 2ND TIME MOMENT	D >= MEAN	.224	.232	.212	.209
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.214	.190	.177	.201
NUMBER OF RAINSTORMS	ALL RAINSTORMS	266.	163.	72.	43.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	128.	90.	42.	23.
NUMBER OF RAINSTORMS	D >= MEAN	68.	55.	25.	15.
NUMBER OF RAINSTORMS	D >= 2 MEAN	31.	23.	10.	3.

TABLE A191. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PORT ARTHUR AP TX (1953-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.380	.325	.315	.350
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.331	.257	.258	.259
A OF NONDIM. HYETOGRAPH	D >= MEAN	.317	.238	.227	.251
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.279	.309	.195	.271
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.451	.421	.419	.431
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.426	.386	.392	.391
NONDIM. 1ST TIME MOMENT	D >= MEAN	.419	.376	.366	.386
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.402	.402	.360	.384
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.284	.247	.248	.251
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.260	.210	.225	.209
NONDIM. 2ND TIME MOMENT	D >= MEAN	.252	.196	.198	.204
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.235	.214	.190	.195
NUMBER OF RAINSTORMS	ALL RAINSTORMS	533.	231.	122.	73.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	258.	131.	74.	42.
NUMBER OF RAINSTORMS	D >= MEAN	180.	73.	38.	29.
NUMBER OF RAINSTORMS	D >= 2 MEAN	88.	29.	15.	8.

TABLE A192. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SAN ANTONIA TX (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.404	.416	.373	.304
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.368	.325	.299	.211
A OF NONDIM. HYETOGRAPH	D >= MEAN	.336	.271	.279	.114
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.321	.217	.239	.054
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.463	.460	.446	.415
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.447	.418	.412	.371
NONDIM. 1ST TIME MOMENT	D >= MEAN	.434	.391	.404	.327
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.427	.363	.408	.264
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.297	.285	.266	.238
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.280	.240	.229	.196
NONDIM. 2ND TIME MOMENT	D >= MEAN	.268	.214	.217	.158
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.260	.192	.209	.108
NUMBER OF RAINSTORMS	ALL RAINSTORMS	400.	225.	107.	66.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	201.	112.	64.	40.
NUMBER OF RAINSTORMS	D >= MEAN	129.	72.	41.	26.
NUMBER OF RAINSTORMS	D >= 2 MEAN	60.	34.	14.	8.

TABLE A193. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WACO AP TX (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.399	.359	.323	.283
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.311	.343	.298	.233
A OF NONDIM. HYETOGRAPH	D >= MEAN	.285	.305	.311	.119
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.307	.301	.304	.174
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.460	.442	.420	.404
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.423	.433	.402	.382
NONDIM. 1ST TIME MOMENT	D >= MEAN	.412	.413	.399	.337
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.418	.425	.396	.359
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.293	.268	.245	.229
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.257	.257	.226	.206
NONDIM. 2ND TIME MOMENT	D >= MEAN	.245	.236	.226	.161
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.251	.243	.220	.171
NUMBER OF RAINSTORMS	ALL RAINSTORMS	389.	205.	111.	62.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	170.	108.	65.	45.
NUMBER OF RAINSTORMS	D >= MEAN	105.	74.	40.	22.
NUMBER OF RAINSTORMS	D >= 2 MEAN	59.	27.	18.	6.

TABLE A194. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WICHITA FALLS TX (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.384	.328	.347	.280
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.341	.269	.298	.209
A OF NONDIM. HYETOGRAPH	D >= MEAN	.302	.289	.256	.156
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.329	.247	.181	.121
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.456	.431	.433	.407
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.436	.403	.410	.375
NONDIM. 1ST TIME MOMENT	D >= MEAN	.419	.411	.391	.347
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.429	.396	.345	.341
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.289	.253	.260	.231
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.269	.224	.236	.200
NONDIM. 2ND TIME MOMENT	D >= MEAN	.252	.229	.216	.174
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.263	.212	.177	.166
NUMBER OF RAINSTORMS	ALL RAINSTORMS	413.	217.	137.	78.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	196.	132.	88.	57.
NUMBER OF RAINSTORMS	D >= MEAN	119.	69.	52.	30.
NUMBER OF RAINSTORMS	D >= 2 MEAN	57.	31.	19.	11.

TABLE A195. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MILFORD AP UT (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.427	.454	.424	.435
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.380	.444	.389	.397
A OF NONDIM. HYETOGRAPH	D >= MEAN	.373	.415	.376	.348
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.278	.375	.303	.424
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.473	.482	.473	.477
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.455	.478	.460	.463
NONDIM. 1ST TIME MOMENT	D >= MEAN	.450	.465	.454	.445
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.411	.447	.422	.475
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.306	.304	.294	.302
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.289	.296	.281	.285
NONDIM. 2ND TIME MOMENT	D >= MEAN	.283	.279	.277	.260
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.244	.260	.238	.269
NUMBER OF RAINSTORMS	ALL RAINSTORMS	316.	138.	73.	48.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	187.	77.	50.	38.
NUMBER OF RAINSTORMS	D >= MEAN	92.	40.	29.	19.
NUMBER OF RAINSTORMS	D >= 2 MEAN	38.	16.	5.	4.

TABLE A196. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SALT LAKE CITY UT (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.470	.445	.440	.465
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.443	.421	.436	.450
A OF NONDIM. HYETOGRAPH	D >= MEAN	.426	.381	.429	.406
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.392	.361	.272	.062
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.489	.478	.478	.485
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.479	.468	.476	.479
NONDIM. 1ST TIME MOMENT	D >= MEAN	.471	.450	.471	.459
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.458	.437	.386	.306
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.322	.301	.297	.296
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.312	.288	.292	.289
NONDIM. 2ND TIME MOMENT	D >= MEAN	.305	.268	.291	.273
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.291	.251	.207	.146
NUMBER OF RAINSTORMS	ALL RAINSTORMS	416.	191.	120.	64.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	217.	124.	85.	50.
NUMBER OF RAINSTORMS	D >= MEAN	116.	55.	46.	26.
NUMBER OF RAINSTORMS	D >= 2 MEAN	55.	16.	11.	4.

TABLE A197. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION BURLINGTON AP VT (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.432	.445	.428	.423
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.390	.442	.417	.416
A OF NONDIM. HYETOGRAPH	D >= MEAN	.358	.437	.388	.392
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.327	.420	.354	.424
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.475	.479	.472	.472
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.457	.478	.466	.468
NONDIM. 1ST TIME MOMENT	D >= MEAN	.444	.475	.452	.459
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.431	.464	.422	.474
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.308	.303	.292	.292
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.291	.298	.285	.285
NONDIM. 2ND TIME MOMENT	D >= MEAN	.278	.294	.270	.274
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.265	.279	.236	.285
NUMBER OF RAINSTORMS	ALL RAINSTORMS	907.	446.	250.	144.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	433.	256.	159.	99.
NUMBER OF RAINSTORMS	D >= MEAN	234.	139.	88.	52.
NUMBER OF RAINSTORMS	D >= 2 MEAN	105.	53.	25.	14.

TABLE A198. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION NEWPORT VT (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.425	.440	.442	.435
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.357	.415	.419	.411
A OF NONDIM. HYETOGRAPH	D >= MEAN	.346	.379	.408	.371
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.313	.330	.451	.339
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.472	.474	.478	.475
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.446	.462	.469	.466
NONDIM. 1ST TIME MOMENT	D >= MEAN	.439	.443	.461	.450
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.422	.423	.485	.440
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.306	.300	.303	.295
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.279	.284	.291	.282
NONDIM. 2ND TIME MOMENT	D >= MEAN	.272	.265	.283	.259
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.256	.242	.305	.243
NUMBER OF RAINSTORMS	ALL RAINSTORMS	915.	505.	328.	204.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	399.	285.	198.	141.
NUMBER OF RAINSTORMS	D >= MEAN	228.	156.	106.	68.
NUMBER OF RAINSTORMS	D >= 2 MEAN	104.	59.	39.	23.

TABLE A199. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION NORFOLK AP VA (1954-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.389	.389	.376	.385
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.325	.360	.297	.375
A OF NONDIM. HYETOGRAPH	D >= MEAN	.303	.287	.279	.292
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.324	.275	.292	.204
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.458	.451	.450	.452
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.431	.435	.418	.447
NONDIM. 1ST TIME MOMENT	D >= MEAN	.423	.401	.404	.412
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.431	.397	.394	.381
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.291	.273	.271	.273
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.264	.257	.239	.267
NONDIM. 2ND TIME MOMENT	D >= MEAN	.257	.222	.225	.237
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.264	.215	.220	.194
NUMBER OF RAINSTORMS	ALL RAINSTORMS	534.	255.	152.	91.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	239.	136.	85.	60.
NUMBER OF RAINSTORMS	D >= MEAN	151.	79.	48.	26.
NUMBER OF RAINSTORMS	D >= 2 MEAN	76.	32.	24.	9.

TABLE A200. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION RICHMOND AP VA (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.403	.393	.375	.356
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.358	.334	.299	.275
A OF NONDIM. HYETOGRAPH	D >= MEAN	.355	.337	.241	.205
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.297	.366	.198	.096
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.462	.454	.449	.440
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.442	.428	.415	.407
NONDIM. 1ST TIME MOMENT	D >= MEAN	.440	.424	.385	.375
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.416	.439	.363	.330
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.295	.278	.269	.258
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.276	.249	.235	.222
NONDIM. 2ND TIME MOMENT	D >= MEAN	.273	.246	.203	.189
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.249	.262	.175	.147
NUMBER OF RAINSTORMS	ALL RAINSTORMS	630.	301.	171.	97.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	309.	161.	91.	59.
NUMBER OF RAINSTORMS	D >= MEAN	179.	97.	52.	33.
NUMBER OF RAINSTORMS	D >= 2 MEAN	85.	47.	24.	15.

TABLE A201. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ROANOKE AP VA (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.409	.412	.395	.417
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.354	.370	.336	.410
A OF NONDIM. HYETOGRAPH	D >= MEAN	.308	.352	.296	.399
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.339	.338	.248	.305
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.465	.463	.458	.466
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.441	.442	.434	.463
NONDIM. 1ST TIME MOMENT	D >= MEAN	.421	.432	.415	.452
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.430	.421	.384	.401
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.298	.285	.281	.284
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.274	.261	.254	.277
NONDIM. 2ND TIME MOMENT	D >= MEAN	.255	.251	.228	.267
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.263	.241	.207	.219
NUMBER OF RAINSTORMS	ALL RAINSTORMS	697.	346.	171.	117.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	313.	185.	98.	86.
NUMBER OF RAINSTORMS	D >= MEAN	195.	102.	53.	41.
NUMBER OF RAINSTORMS	D >= 2 MEAN	96.	41.	20.	11.

TABLE A202. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WASH. NATIONAL VA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.379	.361	.409	.377
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.311	.303	.354	.353
A OF NONDIM. HYETOGRAPH	D >= MEAN	.292	.247	.290	.347
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.256	.221	.271	.302
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.454	.440	.460	.455
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.425	.411	.432	.443
NONDIM. 1ST TIME MOMENT	D >= MEAN	.414	.381	.399	.441
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.397	.360	.390	.418
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.287	.264	.283	.274
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.258	.230	.255	.261
NONDIM. 2ND TIME MOMENT	D >= MEAN	.247	.203	.220	.252
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.230	.184	.212	.235
NUMBER OF RAINSTORMS	ALL RAINSTORMS	611.	340.	179.	102.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	291.	179.	98.	63.
NUMBER OF RAINSTORMS	D >= MEAN	178.	104.	55.	34.
NUMBER OF RAINSTORMS	D >= 2 MEAN	83.	46.	20.	15.

TABLE A203. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION COULEE DAM WA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.480	.486	.443	.482
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.472	.483	.434	.450
A OF NONDIM. HYETOGRAPH	D >= MEAN	.423	.517	.387	.330
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.413	.349	.251	.290
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.493	.494	.476	.494
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.490	.493	.471	.483
NONDIM. 1ST TIME MOMENT	D >= MEAN	.472	.503	.447	.443
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.470	.428	.391	.429
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.326	.320	.301	.316
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.323	.315	.293	.302
NONDIM. 2ND TIME MOMENT	D >= MEAN	.305	.321	.269	.258
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.303	.246	.208	.252
NUMBER OF RAINSTORMS	ALL RAINSTORMS	319.	186.	99.	63.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	225.	127.	69.	41.
NUMBER OF RAINSTORMS	D >= MEAN	95.	65.	33.	17.
NUMBER OF RAINSTORMS	D >= 2 MEAN	31.	13.	9.	9.

TABLE A204. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION OLYMPIA AP WA (1955-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.475	.476	.472	.467
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.466	.467	.469	.463
A OF NONDIM. HYETOGRAPH	D >= MEAN	.425	.436	.483	.461
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.405	.413	.473	.431
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.491	.491	.490	.488
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.488	.488	.489	.486
NONDIM. 1ST TIME MOMENT	D >= MEAN	.472	.476	.494	.485
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.463	.466	.489	.476
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.324	.318	.313	.309
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.321	.313	.310	.305
NONDIM. 2ND TIME MOMENT	D >= MEAN	.306	.300	.313	.300
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.296	.286	.302	.292
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1767.	948.	652.	397.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	1296.	719.	498.	306.
NUMBER OF RAINSTORMS	D >= MEAN	517.	346.	239.	144.
NUMBER OF RAINSTORMS	D >= 2 MEAN	161.	97.	52.	33.

TABLE A205. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SEATTLE-TACOMA WA (1965-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.503	.469	.492	.513
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.505	.459	.497	.513
A OF NONDIM. HYETOGRAPH	D >= MEAN	.503	.432	.477	.495
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.442	.448	.389	.579
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.500	.489	.497	.504
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.501	.486	.499	.504
NONDIM. 1ST TIME MOMENT	D >= MEAN	.499	.477	.492	.497
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.476	.481	.460	.526
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.334	.315	.319	.323
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.334	.310	.320	.322
NONDIM. 2ND TIME MOMENT	D >= MEAN	.332	.296	.309	.311
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.309	.299	.274	.327
NUMBER OF RAINSTORMS	ALL RAINSTORMS	887.	516.	298.	224.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	634.	398.	239.	191.
NUMBER OF RAINSTORMS	D >= MEAN	279.	163.	103.	88.
NUMBER OF RAINSTORMS	D >= 2 MEAN	92.	48.	21.	13.

TABLE A206. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SPOKANE AP WA (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.477	.475	.478	.501
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.457	.442	.478	.500
A OF NONDIM. HYETOGRAPH	D >= MEAN	.411	.386	.479	.466
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.318	.343	.479	.323
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.491	.490	.492	.499
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.483	.477	.491	.499
NONDIM. 1ST TIME MOMENT	D >= MEAN	.465	.458	.490	.486
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.431	.438	.486	.430
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.324	.314	.313	.316
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.317	.298	.312	.314
NONDIM. 2ND TIME MOMENT	D >= MEAN	.299	.277	.304	.298
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.264	.256	.292	.246
NUMBER OF RAINSTORMS	ALL RAINSTORMS	395.	204.	115.	83.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	226.	119.	91.	66.
NUMBER OF RAINSTORMS	D >= MEAN	111.	56.	45.	32.
NUMBER OF RAINSTORMS	D >= 2 MEAN	41.	22.	12.	5.

TABLE A207. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION WALLA WALLA CI WA (1948-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.468	.458	.440	.453
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.456	.438	.429	.470
A OF NONDIM. HYETOGRAPH	D >= MEAN	.483	.403	.400	.419
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.465	.355	.270	.382
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.489	.483	.479	.485
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.484	.476	.475	.490
NONDIM. 1ST TIME MOMENT	D >= MEAN	.492	.462	.467	.472
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.480	.445	.418	.451
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.322	.305	.296	.301
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.318	.295	.289	.304
NONDIM. 2ND TIME MOMENT	D >= MEAN	.325	.279	.276	.281
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.313	.262	.218	.260
NUMBER OF RAINSTORMS	ALL RAINSTORMS	316.	189.	103.	80.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	228.	122.	73.	63.
NUMBER OF RAINSTORMS	D >= MEAN	103.	51.	34.	25.
NUMBER OF RAINSTORMS	D >= 2 MEAN	31.	15.	11.	8.

TABLE A208. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION YAKIMA AP WA (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.455	.427	.449	.425
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.420	.417	.444	.423
A OF NONDIM. HYETOGRAPH	D >= MEAN	.413	.373	.446	.449
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.373	.384	.334	.437
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.483	.475	.482	.474
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.471	.471	.480	.473
NONDIM. 1ST TIME MOMENT	D >= MEAN	.466	.455	.480	.481
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.449	.455	.445	.479
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.317	.303	.307	.294
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.304	.297	.303	.292
NONDIM. 2ND TIME MOMENT	D >= MEAN	.299	.280	.301	.293
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.282	.285	.267	.275
NUMBER OF RAINSTORMS	ALL RAINSTORMS	194.	113.	50.	38.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	114.	87.	41.	32.
NUMBER OF RAINSTORMS	D >= MEAN	53.	41.	16.	15.
NUMBER OF RAINSTORMS	D >= 2 MEAN	18.	11.	4.	4.

TABLE A209. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION CHARLESTON AP WV (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.407	.383	.379	.405
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.386	.326	.323	.373
A OF NONDIM. HYETOGRAPH	D >= MEAN	.358	.282	.280	.306
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.330	.262	.250	.466
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.465	.451	.451	.461
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.454	.426	.426	.447
NONDIM. 1ST TIME MOMENT	D >= MEAN	.443	.404	.405	.423
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.428	.386	.395	.484
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.298	.276	.276	.282
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.288	.251	.249	.267
NONDIM. 2ND TIME MOMENT	D >= MEAN	.276	.231	.231	.244
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.262	.212	.216	.307
NUMBER OF RAINSTORMS	ALL RAINSTORMS	771.	375.	202.	101.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	409.	231.	116.	65.
NUMBER OF RAINSTORMS	D >= MEAN	217.	133.	67.	37.
NUMBER OF RAINSTORMS	D >= 2 MEAN	102.	46.	24.	10.

TABLE A210. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION ELKINS AP WV (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.411	.408	.430	.397
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.351	.381	.440	.379
A OF NONDIM. HYETOGRAPH	D >= MEAN	.332	.365	.399	.367
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.317	.308	.248	.359
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.467	.461	.471	.460
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.443	.449	.473	.453
NONDIM. 1ST TIME MOMENT	D >= MEAN	.434	.440	.456	.447
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.427	.415	.391	.445
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.300	.285	.294	.283
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.276	.271	.293	.276
NONDIM. 2ND TIME MOMENT	D >= MEAN	.267	.261	.273	.269
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.260	.239	.219	.269
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1010.	509.	274.	175.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	512.	325.	176.	129.
NUMBER OF RAINSTORMS	D >= MEAN	301.	187.	94.	67.
NUMBER OF RAINSTORMS	D >= 2 MEAN	146.	68.	32.	18.

TABLE A211. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PARKERSBURG CI WV (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.421	.386	.390	.336
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.381	.348	.353	.301
A OF NONDIM. HYETOGRAPH	D >= MEAN	.360	.309	.321	.216
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.349	.266	.321	.191
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.470	.455	.456	.437
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.454	.437	.441	.422
NONDIM. 1ST TIME MOMENT	D >= MEAN	.445	.418	.423	.385
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.439	.398	.425	.376
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.303	.280	.280	.258
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.287	.261	.264	.242
NONDIM. 2ND TIME MOMENT	D >= MEAN	.279	.239	.247	.207
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.273	.221	.244	.198
NUMBER OF RAINSTORMS	ALL RAINSTORMS	764.	369.	210.	102.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	409.	214.	127.	71.
NUMBER OF RAINSTORMS	D >= MEAN	229.	118.	74.	32.
NUMBER OF RAINSTORMS	D >= 2 MEAN	94.	44.	28.	12.

TABLE A212. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION GREEN BAY AP WI (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.434	.380	.401	.409
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.378	.345	.359	.400
A OF NONDIM. HYETOGRAPH	D >= MEAN	.374	.332	.337	.403
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.392	.296	.289	.500
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.475	.453	.461	.465
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.453	.437	.445	.460
NONDIM. 1ST TIME MOMENT	D >= MEAN	.451	.432	.433	.462
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.458	.410	.413	.498
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.308	.276	.281	.283
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.286	.258	.261	.275
NONDIM. 2ND TIME MOMENT	D >= MEAN	.284	.251	.250	.275
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.291	.231	.223	.306
NUMBER OF RAINSTORMS	ALL RAINSTORMS	691.	341.	185.	131.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	317.	196.	116.	94.
NUMBER OF RAINSTORMS	D >= MEAN	183.	112.	69.	49.
NUMBER OF RAINSTORMS	D >= 2 MEAN	91.	42.	18.	13.

TABLE A213. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MADISON AP WI (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.426	.415	.383	.404
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.362	.362	.306	.381
A OF NONDIM. HYETOGRAPH	D >= MEAN	.354	.350	.250	.365
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.337	.297	.257	.327
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.471	.465	.453	.461
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.446	.443	.421	.453
NONDIM. 1ST TIME MOMENT	D >= MEAN	.441	.436	.396	.444
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.430	.409	.407	.436
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.304	.287	.277	.280
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.279	.262	.243	.270
NONDIM. 2ND TIME MOMENT	D >= MEAN	.274	.255	.222	.256
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.263	.230	.230	.239
NUMBER OF RAINSTORMS	ALL RAINSTORMS	719.	336.	182.	129.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	372.	189.	98.	85.
NUMBER OF RAINSTORMS	D >= MEAN	225.	109.	59.	49.
NUMBER OF RAINSTORMS	D >= 2 MEAN	95.	43.	26.	11.

TABLE A214. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION MILWAUKEE AP WI (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.400	.397	.383	.422
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.346	.360	.343	.414
A OF NONDIM. HYETOGRAPH	D >= MEAN	.316	.332	.347	.338
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.313	.334	.269	.174
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.462	.458	.453	.467
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.439	.439	.437	.460
NONDIM. 1ST TIME MOMENT	D >= MEAN	.426	.424	.434	.427
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.423	.423	.401	.345
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.296	.280	.273	.288
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.272	.258	.254	.279
NONDIM. 2ND TIME MOMENT	D >= MEAN	.259	.240	.249	.248
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.256	.235	.219	.175
NUMBER OF RAINSTORMS	ALL RAINSTORMS	670.	340.	211.	126.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	306.	176.	140.	85.
NUMBER OF RAINSTORMS	D >= MEAN	189.	108.	79.	44.
NUMBER OF RAINSTORMS	D >= 2 MEAN	99.	47.	28.	12.

TABLE A215. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION PHELPS DEERSK. WI (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.428	.442	.415	.459
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.385	.412	.400	.435
A OF NONDIM. HYETOGRAPH	D >= MEAN	.365	.433	.377	.396
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.324	.375	.326	.324
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.473	.476	.467	.483
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.456	.462	.459	.475
NONDIM. 1ST TIME MOMENT	D >= MEAN	.446	.467	.448	.461
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.430	.444	.431	.430
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.307	.302	.293	.304
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.289	.285	.281	.292
NONDIM. 2ND TIME MOMENT	D >= MEAN	.279	.289	.269	.277
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.264	.270	.251	.241
NUMBER OF RAINSTORMS	ALL RAINSTORMS	736.	458.	284.	200.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	342.	247.	170.	130.
NUMBER OF RAINSTORMS	D >= MEAN	171.	148.	91.	66.
NUMBER OF RAINSTORMS	D >= 2 MEAN	98.	64.	32.	23.

TABLE A216. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SHERIDAN AP WY (1949-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.480	.430	.472	.416
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.465	.401	.467	.387
A OF NONDIM. HYETOGRAPH	D >= MEAN	.461	.357	.442	.387
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.383	.300	.444	.440
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.493	.473	.489	.469
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.488	.461	.486	.458
NONDIM. 1ST TIME MOMENT	D >= MEAN	.485	.445	.476	.454
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.451	.418	.476	.462
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.326	.295	.308	.291
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.321	.279	.302	.278
NONDIM. 2ND TIME MOMENT	D >= MEAN	.319	.261	.291	.269
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.285	.238	.278	.284
NUMBER OF RAINSTORMS	ALL RAINSTORMS	576.	242.	106.	94.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	359.	143.	72.	66.
NUMBER OF RAINSTORMS	D >= MEAN	169.	79.	37.	31.
NUMBER OF RAINSTORMS	D >= 2 MEAN	67.	22.	13.	10.

TABLE A217. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION FAIRBANKS AP AK (1963-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.475	.462	.469	.526
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.454	.457	.448	.508
A OF NONDIM. HYETOGRAPH	D >= MEAN	.455	.446	.384	.413
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.303	.377	.352	.460
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.490	.484	.488	.509
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.482	.480	.480	.503
NONDIM. 1ST TIME MOMENT	D >= MEAN	.480	.472	.456	.466
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.422	.442	.451	.476
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.323	.312	.313	.337
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.315	.306	.303	.329
NONDIM. 2ND TIME MOMENT	D >= MEAN	.313	.295	.273	.292
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.255	.255	.266	.294
NUMBER OF RAINSTORMS	ALL RAINSTORMS	292.	139.	77.	45.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	161.	88.	54.	30.
NUMBER OF RAINSTORMS	D >= MEAN	79.	43.	22.	14.
NUMBER OF RAINSTORMS	D >= 2 MEAN	27.	16.	7.	5.

TABLE A218. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION JUNEAU AP AK (1963-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.488	.487	.469	.483
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.480	.483	.455	.479
A OF NONDIM. HYETOGRAPH	D >= MEAN	.444	.482	.479	.465
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.460	.420	.350	.465
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.496	.495	.489	.493
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.493	.494	.485	.492
NONDIM. 1ST TIME MOMENT	D >= MEAN	.480	.493	.492	.486
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.486	.470	.449	.487
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.329	.323	.313	.315
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.326	.321	.307	.312
NONDIM. 2ND TIME MOMENT	D >= MEAN	.314	.316	.307	.302
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.319	.290	.265	.303
NUMBER OF RAINSTORMS	ALL RAINSTORMS	611.	346.	233.	173.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	377.	277.	203.	150.
NUMBER OF RAINSTORMS	D >= MEAN	175.	120.	79.	69.
NUMBER OF RAINSTORMS	D >= 2 MEAN	65.	25.	19.	11.

TABLE A219. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION LIHUE AP KAUAI HI (1963-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.460	.444	.441	.456
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.444	.440	.413	.413
A OF NONDIM. HYETOGRAPH	D >= MEAN	.436	.432	.405	.336
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.525	.433	.384	.368
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.485	.477	.479	.484
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.478	.474	.470	.467
NONDIM. 1ST TIME MOMENT	D >= MEAN	.475	.468	.468	.436
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.508	.467	.459	.450
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.318	.306	.305	.307
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.312	.300	.296	.286
NONDIM. 2ND TIME MOMENT	D >= MEAN	.308	.293	.292	.260
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.341	.290	.276	.267
NUMBER OF RAINSTORMS	ALL RAINSTORMS	1209.	422.	196.	100.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	718.	257.	114.	54.
NUMBER OF RAINSTORMS	D >= MEAN	344.	124.	57.	28.
NUMBER OF RAINSTORMS	D >= 2 MEAN	117.	49.	25.	11.

TABLE A220. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION HONOLULU AP HI (1963-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.478	.457	.462	.499
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.462	.452	.477	.468
A OF NONDIM. HYETOGRAPH	D >= MEAN	.436	.454	.457	.497
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.409	.447	.404	.387
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.491	.483	.485	.500
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.485	.479	.490	.490
NONDIM. 1ST TIME MOMENT	D >= MEAN	.474	.478	.481	.502
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.463	.475	.455	.442
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.325	.308	.309	.322
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.318	.298	.310	.305
NONDIM. 2ND TIME MOMENT	D >= MEAN	.308	.295	.301	.314
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.297	.285	.270	.243
NUMBER OF RAINSTORMS	ALL RAINSTORMS	543.	221.	132.	57.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	246.	115.	77.	36.
NUMBER OF RAINSTORMS	D >= MEAN	147.	68.	46.	19.
NUMBER OF RAINSTORMS	D >= 2 MEAN	68.	31.	22.	6.

TABLE A221. JAN-DEC RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION HILO AP MAKA. HI (1963-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.463	.468	.441	.474
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.453	.461	.444	.468
A OF NONDIM. HYETOGRAPH	D >= MEAN	.449	.469	.423	.482
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.442	.460	.432	.510
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.486	.487	.476	.490
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.482	.483	.476	.487
NONDIM. 1ST TIME MOMENT	D >= MEAN	.479	.485	.464	.493
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.477	.480	.469	.511
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.319	.316	.303	.315
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.315	.311	.301	.309
NONDIM. 2ND TIME MOMENT	D >= MEAN	.312	.310	.288	.313
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.310	.304	.289	.324
NUMBER OF RAINSTORMS	ALL RAINSTORMS	2423.	1111.	613.	368.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	1584.	736.	434.	251.
NUMBER OF RAINSTORMS	D >= MEAN	799.	374.	198.	127.
NUMBER OF RAINSTORMS	D >= 2 MEAN	240.	131.	56.	40.

TABLE A222. APR-OCT RAINSTORMS FROM HOURLY PRECIPITATION DATA
AT STATION SAN JUAN AP PR (1967-1978)

PARAMETER	DEPTH GROUP	RAINSTORM DURATION (HR) 2.0	3.0	4.0	5.0
A OF NONDIM. HYETOGRAPH	ALL RAINSTORMS	.431	.434	.377	.448
A OF NONDIM. HYETOGRAPH	D >= 0.5 MEAN	.388	.426	.337	.374
A OF NONDIM. HYETOGRAPH	D >= MEAN	.388	.401	.313	.379
A OF NONDIM. HYETOGRAPH	D >= 2 MEAN	.373	.343	.216	.098
NONDIM. 1ST TIME MOMENT	ALL RAINSTORMS	.471	.473	.445	.486
NONDIM. 1ST TIME MOMENT	D >= 0.5 MEAN	.453	.469	.424	.455
NONDIM. 1ST TIME MOMENT	D >= MEAN	.451	.460	.408	.457
NONDIM. 1ST TIME MOMENT	D >= 2 MEAN	.442	.445	.352	.354
NONDIM. 2ND TIME MOMENT	ALL RAINSTORMS	.305	.300	.271	.313
NONDIM. 2ND TIME MOMENT	D >= 0.5 MEAN	.286	.292	.250	.273
NONDIM. 2ND TIME MOMENT	D >= MEAN	.284	.281	.231	.275
NONDIM. 2ND TIME MOMENT	D >= 2 MEAN	.275	.259	.182	.167
NUMBER OF RAINSTORMS	ALL RAINSTORMS	411.	133.	91.	24.
NUMBER OF RAINSTORMS	D >= 0.5 MEAN	209.	87.	56.	17.
NUMBER OF RAINSTORMS	D >= MEAN	122.	42.	29.	11.
NUMBER OF RAINSTORMS	D >= 2 MEAN	51.	13.	13.	3.

APPENDIX B. Summary of Results of ARS Data

TABLE B 1 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION BENTONVILLE, AR
(A) TIME INTERVAL = 5.0 MIN. (1939-1947)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.313	.373	.345	.233	.185	.105	.271
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	-9.999	.608	.123	.364	.468	.689	-9.999
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.376	.401	.393	.296	.280	.175	.271
A OF NONDIM. HYETOGRAPH		D >= MEAN	.313	.467	.308	.291	.280	.251	.271
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.438	.458	.450	.384	.390	.316	.424
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	-9.999	.536	.374	.426	.489	.563	-9.999
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.459	.467	.465	.409	.423	.358	.424
NONDIM. 1ST TIME MOMENT		D >= MEAN	.438	.489	.437	.403	.423	.378	.424
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.271	.273	.273	.208	.214	.162	.261
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	-9.999	.365	.188	.254	.303	.403	-9.999
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.292	.287	.280	.235	.243	.193	.261
NONDIM. 2ND TIME MOMENT		D >= MEAN	.271	.310	.259	.228	.243	.222	.261
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.272	.243	.213	.212	.231	.232	.286
NONDIM. TIME STD.DEV.		D >= 2 MEAN	-9.999	.279	.219	.237	.222	.293	-9.999
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.274	.251	.212	.231	.228	.225	.286
NONDIM. TIME STD.DEV.		D >= MEAN	.272	.257	.214	.224	.228	.247	.286
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	6	3	5	5	4	3	1
NUMBER OF RAINSTORMS		D >= 2 MEAN	0	2	1	4	2	1	0
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	10	8	8	11	6	7	1
NUMBER OF RAINSTORMS		D >= MEAN	6	5	6	9	6	4	1

TABLE B 1 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION BENTONVILLE, AR
(B) TIME INTERVAL = 15.0 MIN. (1939-1947)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.196	.344	.233	0.000	.118	.181	.500
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.579	.382	.256	.185	0.000	-9.999	-9.999
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.366	.352	.230	.092	.230	.181	.333
A OF NONDIM. HYETOGRAPH		D >= MEAN	.402	.361	.239	.123	.039	.181	.500
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.372	.444	.413	.278	.373	.326	.519
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.522	.448	.419	.395	.209	-9.999	-9.999
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.443	.439	.411	.325	.369	.326	.380
NONDIM. 1ST TIME MOMENT		D >= MEAN	.453	.446	.415	.356	.264	.326	.519
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.206	.262	.252	.136	.194	.200	.382
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.356	.255	.205	.219	.075	-9.999	-9.999
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.276	.252	.231	.163	.202	.200	.265
NONDIM. 2ND TIME MOMENT		D >= MEAN	.286	.259	.240	.192	.115	.200	.382
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.225	.230	.245	.243	.235	.255	.174
NONDIM. TIME STD.DEV		D >= 2 MEAN	.259	.200	.156	.234	.153	-9.999	-9.999
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.245	.215	.215	.216	.200	.255	.162
NONDIM. TIME STD.DEV.		D >= MEAN	.243	.217	.223	.237	.180	.255	.174
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	6	6	6	1	1	6	2
NUMBER OF RAINSTORMS		D >= 2 MEAN	7	5	2	2	2	0	0
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	15	15	11	4	6	6	3
NUMBER OF RAINSTORMS		D >= MEAN	13	11	8	3	3	6	2

TABLE B 1 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN BENTONVILLE, AR
(C) TIME INTERVAL = 30.0 MIN. (1939-1947)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.367	.313	.222	0.000	0.000	.660
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.654	.340	.192	.093	0.000	.949
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.447	.319	.252	.082	.194	.480
A OF NONDIM. HYETOGRAPH		D >= MEAN	.458	.327	.212	.037	0.000	.718
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.449	.396	.368	.227	.196	.580
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.557	.428	.377	.348	.228	.650
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.479	.407	.389	.314	.337	.467
NONDIM. 1ST TIME MOMENT		D >= MEAN	.483	.412	.371	.276	.212	.594
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.282	.229	.199	.078	.054	.411
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.390	.237	.189	.162	.099	.456
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.312	.233	.209	.148	.176	.312
NONDIM. 2ND TIME MOMENT		D >= MEAN	.316	.233	.196	.112	.077	.420
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.245	.192	.190	.157	.125	.165
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.260	.202	.191	.195	.217	.184
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.251	.200	.190	.200	.200	.201
NONDIM. TIME STD.DEV.		D >= MEAN	.250	.197	.191	.172	.171	.169
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	3	6	8	3	1	4
NUMBER OF RAINSTORMS		D >= 2 MEAN	6	6	4	2	1	1
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	24	21	14	8	4	10
NUMBER OF RAINSTORMS		D >= MEAN	19	12	12	5	2	5

TABLE B 1 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION BENTONVILLE, AR
(D) TIME INTERVAL = 60.0 MIN. (1939-1947)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.314	.277	.264	.203
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.228	.153	.224	0.000
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.304	.282	.302	.257
A OF NONDIM. HYETOGRAPH		D >= MEAN	.285	.206	.255	.152
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.426	.416	.402	.358
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.374	.336	.315	.268
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.420	.399	.404	.375
NONDIM. 1ST TIME MOMENT		D >= MEAN	.409	.370	.383	.335
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.259	.232	.214	.194
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.207	.169	.158	.119
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.253	.227	.226	.213
NONDIM. 2ND TIME MOMENT		D >= MEAN	.242	.196	.201	.175
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.238	.213	.182	.219
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.213	.196	.170	.215
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.230	.212	.196	.212
NONDIM. TIME STD.DEV.		D >= MEAN	.229	.204	.180	.218
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	14	6	7	6
NUMBER OF RAINSTORMS		D >= 2 MEAN	7	8	2	2
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	35	21	15	17
NUMBER OF RAINSTORMS		D >= MEAN	21	14	9	8

TABLE B 2 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION SAFFORD, AZ
(A) TIME INTERVAL = 5.0 MIN. (1939-1975)

PARAMETER		DEPTH GROUP		RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >=	MEAN	.490	.440	.465	.203	.569	.020	.286
A OF NONDIM. HYETOGRAPH		D >= 2	MEAN	.578	.440	.181	.284	.123	.216	0.000
A OF NONDIM. HYETOGRAPH		D >= 0.5	MEAN	.509	.438	.406	.354	.398	.222	.305
A OF NONDIM. HYETOGRAPH		D >=	MEAN	.513	.440	.316	.233	.359	.167	.238
NONDIM. 1ST TIME MOMENT	2MEAN>	D >=	MEAN	.497	.478	.480	.390	.509	.340	.411
NONDIM. 1ST TIME MOMENT		D >= 2	MEAN	.527	.480	.375	.414	.329	.360	.232
NONDIM. 1ST TIME MOMENT		D >= 0.5	MEAN	.503	.477	.461	.446	.448	.376	.411
NONDIM. 1ST TIME MOMENT		D >=	MEAN	.505	.478	.425	.399	.424	.355	.381
NONDIM. 2ND TIME MOMENT	2MEAN>	D >=	MEAN	.330	.304	.306	.220	.338	.169	.253
NONDIM. 2ND TIME MOMENT		D >= 2	MEAN	.360	.297	.199	.238	.165	.193	.079
NONDIM. 2ND TIME MOMENT		D >= 0.5	MEAN	.336	.302	.289	.271	.279	.208	.251
NONDIM. 2ND TIME MOMENT		D >=	MEAN	.338	.302	.250	.226	.257	.187	.224
NONDIM. TIME STD.DEV.	2MEAN>	D >=	MEAN	.279	.258	.255	.239	.247	.226	.249
NONDIM. TIME STD.DEV.		D >= 2	MEAN	.270	.250	.222	.234	.209	.207	.160
NONDIM. TIME STD.DEV.		D >= 0.5	MEAN	.280	.256	.258	.241	.248	.220	.246
NONDIM. TIME STD.DEV.		D >=	MEAN	.276	.256	.238	.237	.229	.211	.234
NUMBER OF RAINSTORMS	2MEAN>	D >=	MEAN	28	29	9	12	9	2	5
NUMBER OF RAINSTORMS		D >= 2	MEAN	10	9	10	7	8	6	1
NUMBER OF RAINSTORMS		D >= 0.5	MEAN	81	61	34	31	27	14	8
NUMBER OF RAINSTORMS		D >=	MEAN	38	38	19	19	17	8	6

TABLE B 2 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION SAFFORD, AZ
(B) TIME INTERVAL = 15.0 MIN. (1939-1975)

PARAMETER		DEPTH GROUP		RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >=	MEAN	.460	.268	.209	.041	.293	.042	.180
A OF NONDIM. HYETOGRAPH		D >= 2	MEAN	.374	.357	.143	.214	.376	.893	-9.999
A OF NONDIM. HYETOGRAPH		D >= 0.5	MEAN	.436	.346	.253	.338	.305	.290	.180
A OF NONDIM. HYETOGRAPH		D >=	MEAN	428	.306	.187	.128	.305	.326	.180
NONDIM. 1ST TIME MOMENT	2MEAN>	D >=	MEAN	.488	.411	.369	.315	.419	.347	.393
NONDIM. 1ST TIME MOMENT		D >= 2	MEAN	.444	.438	.345	.314	459	.631	-9.999
NONDIM. 1ST TIME MOMENT		D >= 0.5	MEAN	.477	.441	.391	.422	.425	.430	.393
NONDIM. 1ST TIME MOMENT		D >=	MEAN	.471	.422	.361	.315	.425	.442	.393
NONDIM. 2ND TIME MOMENT	2MEAN>	D >=	MEAN	.321	.227	.196	.161	.258	.207	.217
NONDIM. 2ND TIME MOMENT		D >= 2	MEAN	.278	.246	.166	.143	.285	.426	-9.999
NONDIM. 2ND TIME MOMENT		D >= 0.5	MEAN	.310	.256	.216	.253	.262	.266	.217
NONDIM. 2ND TIME MOMENT		D >=	MEAN	.305	.235	.186	.152	.262	.280	.217
NONDIM. TIME STD.DEV.	2MEAN>	D >=	MEAN	.261	.218	.207	.231	.274	.292	.250
NONDIM. TIME STD.DEV.		D >= 2	MEAN	.242	.207	.186	.124	.274	.167	-9.999
NONDIM. TIME STD.DEV.		D >= 0.5	MEAN	.261	.224	.212	.232	.274	.261	.250
NONDIM. TIME STD.DEV.		D >=	MEAN	.254	.213	.200	.177	.274	.250	.250
NUMBER OF RAINSTORMS	2MEAN>	D >=	MEAN	36	19	19	3	6	2	1
NUMBER OF RAINSTORMS		D >= 2	MEAN	22	14	9	3	1	1	0
NUMBER OF RAINSTORMS		D >= 0.5	MEAN	112	51	47	15	7	8	1
NUMBER OF RAINSTORMS		D >=	MEAN	58	33	28	6	7	3	1

TABLE B 2 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN SAFFORD, AZ
(C) TIME INTERVAL = 30.0 MIN. (1939-1975)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.443	.188	.246	.150	.375	.087
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.365	.211	.326	.038	0.000	0.000
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.412	.248	.390	.162	.267	.108
A OF NONDIM. HYETOGRAPH		D >= MEAN	.408	.196	.271	.139	.322	.058
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.470	.360	.359	.335	.442	.353
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.445	.346	.442	.323	.179	.245
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.464	.383	.439	.338	.399	.327
NONDIM. 1ST TIME MOMENT		D >= MEAN	.459	.355	.385	.334	.404	.317
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.304	.188	.197	.175	.281	.180
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.279	.179	.243	.142	.065	.095
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.297	.209	.264	.182	.245	.165
NONDIM. 2ND TIME MOMENT		D >= MEAN	.293	.185	.212	.172	.250	.153
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.240	.209	.192	.213	.256	.232
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.235	.189	.199	.184	.181	.196
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.247	.210	.219	.221	.258	.224
NONDIM. TIME STD.DEV.		D >= MEAN	.238	.202	.194	.210	.246	.220
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	35	26	11	17	6	2
NUMBER OF RAINSTORMS		D >= 2 MEAN	28	15	5	2	1	1
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	103	68	29	26	14	8
NUMBER OF RAINSTORMS		D >= MEAN	63	41	16	19	7	3

TABLE B 2 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION SAFFORD, AZ
(D) TIME INTERVAL = 60.0 MIN. (1939-1975)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.177	.224	.138	.274
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.321	.078	0.000	.187
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.303	.281	.168	.311
A OF NONDIM. HYETOGRAPH		D >= MEAN	.244	.175	.109	.252
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.370	.365	.345	.395
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.418	.283	.186	.347
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.417	.392	.347	.416
NONDIM. 1ST TIME MOMENT		D >= MEAN	.392	.338	.312	.383
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.203	.195	.172	.237
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.252	.128	.066	.195
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.251	.222	.182	.252
NONDIM. 2ND TIME MOMENT		D >= MEAN	.225	.173	.150	.226
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.227	.208	.202	.252
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.219	.189	.177	.238
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.232	.218	.216	.253
NONDIM. TIME STD.DEV.		D >= MEAN	.223	.202	.197	.248
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	36	22	15	9
NUMBER OF RAINSTORMS		D >= 2 MEAN	31	11	4	3
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	117	56	28	20
NUMBER OF RAINSTORMS		D >= MEAN	67	33	19	12

TABLE B 3 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION REYNOLDS, ID
(A) TIME INTERVAL = 5.0 MIN. (1962-1975)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.650	.536	.406	.496	.450	.394	.197
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.333	.514	.384	.412	.471	.238	.249
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.439	.502	.456	.482	.470	.429	.479
A OF NONDIM. HYETOGRAPH		D >= MEAN	.413	.520	.397	.475	.457	.316	.210
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.550	.512	.469	.499	.483	.465	.359
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.444	.505	.461	.463	.474	.375	.416
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.480	.501	.485	.493	.488	.463	.466
NONDIM. 1ST TIME MOMENT		D >= MEAN	.471	.507	.466	.490	.480	.420	.374
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.383	.344	.287	.319	.303	.293	.196
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.278	.321	.282	.293	.307	.203	.239
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.313	.327	.305	.315	.311	.293	.313
NONDIM. 2ND TIME MOMENT		D >= MEAN	.304	.328	.285	.312	.304	.248	.207
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.284	.286	.258	.247	.262	.269	.222
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.271	.248	.258	.258	.254	.211	.255
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.282	.271	.258	.256	.265	.251	.243
NONDIM. TIME STD.DEV.		D >= MEAN	.274	.259	.258	.250	.260	.240	.231
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	1	2	6	9	9	4	3
NUMBER OF RAINSTORMS		D >= 2 MEAN	3	5	4	3	4	4	1
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	11	18	25	24	28	15	10
NUMBER OF RAINSTORMS		D >= MEAN	4	7	10	12	13	8	4

TABLE B 3 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION REYNOLDS, ID
(B) TIME INTERVAL = 15.0 MIN. (1962-1975)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.484	.516	.463	.317	.163	.246	.453
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.292	.498	.444	.404	.272	.500	-9.999
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.471	.513	.489	.416	.196	.351	.469
A OF NONDIM. HYETOGRAPH		D >= MEAN	.422	.510	.454	.337	.196	.331	.453
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.495	.505	.488	.387	.331	.415	.484
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.423	.488	.481	.468	.379	.530	-9.999
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.488	.502	.496	.443	.345	.450	.486
NONDIM. 1ST TIME MOMENT		D >= MEAN	.472	.500	.485	.406	.345	.454	.484
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.328	.325	.303	.236	.196	.236	.309
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.256	.307	.288	.289	.215	.395	-9.999
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.322	.321	.309	.280	.202	.286	.319
NONDIM. 2ND TIME MOMENT		D >= MEAN	.305	.319	.296	.248	.202	.289	.309
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.272	.244	.243	.235	.251	.246	.262
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.254	.223	.217	.256	.220	.191	-9.999
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.268	.243	.235	.246	.242	.238	.254
NONDIM. TIME STD.DEV.		D >= MEAN	.266	.238	.231	.240	.242	.227	.262
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	21	22	11	10	7	4	4
NUMBER OF RAINSTORMS		D >= 2 MEAN	10	9	10	3	3	2	0
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	70	45	43	24	10	9	6
NUMBER OF RAINSTORMS		D >= MEAN	31	31	21	13	10	6	4

TABLE B 3 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN REYNOLDS, ID
(C) TIME INTERVAL = 30.0 MIN. (1962-1975)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.440	.375	.322	.249	.327	.492
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.335	.294	.484	.272	.471	.467
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.425	.343	.405	.391	.382	.543
A OF NONDIM. HYETOGRAPH		D >= MEAN	.392	.331	.387	.259	.379	.488
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.477	.454	.407	.374	.415	.497
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.434	.401	.494	.398	.507	.489
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.471	.430	.454	.450	.456	.512
NONDIM. 1ST TIME MOMENT		D >= MEAN	.457	.425	.442	.384	.449	.496
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.310	.275	.244	.236	.246	.312
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.267	.222	.303	.225	.350	.311
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.304	.252	.277	.280	.285	.329
NONDIM. 2ND TIME MOMENT		D >= MEAN	.290	.246	.268	.231	.284	.312
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.252	.225	.236	.264	.214	.248
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.249	.204	.211	.227	.225	.269
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.260	.221	.230	.235	.212	.241
NONDIM. TIME STD.DEV.		D >= MEAN	.251	.214	.226	.249	.218	.250
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	26	16	18	7	7	7
NUMBER OF RAINSTORMS		D >= 2 MEAN	22	19	12	5	4	1
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	83	57	52	23	16	13
NUMBER OF RAINSTORMS		D >= MEAN	48	35	30	12	11	8

TABLE B 3 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION REYNOLDS, ID
(D) TIME INTERVAL = 60.0 MIN. (1962-1975)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.439	.361	.362	.454
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.380	.322	.449	.091
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.429	.361	.387	.421
A OF NONDIM. HYETOGRAPH		D >= MEAN	.407	.346	.397	.333
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.471	.434	.436	.484
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.450	.426	.489	.328
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.470	.440	.457	.461
NONDIM. 1ST TIME MOMENT		D >= MEAN	.459	.431	.457	.432
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.304	.253	.275	.292
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.283	.252	.329	.151
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.304	.261	.286	.280
NONDIM. 2ND TIME MOMENT		D >= MEAN	.292	.252	.297	.245
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.252	.217	.231	.225
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.239	.227	.234	.191
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.252	.223	.229	.223
NONDIM. TIME STD.DEV.		D >= MEAN	.245	.221	.232	.213
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	26	24	13	12
NUMBER OF RAINSTORMS		D >= 2 MEAN	31	15	9	6
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	98	61	33	34
NUMBER OF RAINSTORMS		D >= MEAN	57	39	22	18

TABLE B 4 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION TREYNOR,IA
(A) TIME INTERVAL = 5.0 MIN. (1962-1975)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.520	.281	.230	.311	.398	.284	.731
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.354	.551	.196	.184	.355	.475	.301
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.463	.412	.234	.263	.384	.387	.478
A OF NONDIM. HYETOGRAPH		D >= MEAN	.454	.385	.213	.253	.380	.362	.516
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.507	.418	.405	.433	.466	.396	.606
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.446	.503	.396	.373	.451	.478	.418
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.486	.464	.397	.412	.456	.442	.490
NONDIM. 1ST TIME MOMENT		D >= MEAN	.482	.450	.400	.406	.460	.430	.512
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.340	.253	.227	.250	.306	.240	.444
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.279	.336	.218	.188	.267	.309	.242
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.320	.294	.225	.233	.287	.282	.323
NONDIM. 2ND TIME MOMENT		D >= MEAN	.316	.285	.223	.222	.290	.268	.343
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.273	.265	.239	.230	.255	.256	.234
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.258	.245	.238	.196	.238	.234	.227
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.273	.262	.241	.224	.254	.258	.239
NONDIM. TIME STD.DEV.		D >= MEAN	.267	.257	.239	.215	.248	.247	.230
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	9	8	9	6	10	13	6
NUMBER OF RAINSTORMS		D >= 2 MEAN	6	5	9	5	7	9	6
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	28	21	24	17	33	32	18
NUMBER OF RAINSTORMS		D >= MEAN	15	13	18	11	17	22	12

TABLE B 4 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION TREYNOR,IA
(B) TIME INTERVAL = 15.0 MIN. (1962-1975)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.329	.296	.268	.401	.423	.277	.316
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.279	.479	.351	.171	.148	.687	-9.999
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.367	.397	.329	.374	.330	.382	.381
A OF NONDIM. HYETOGRAPH		D >= MEAN	.302	.348	.315	.318	.285	.413	.316
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.439	.422	.390	.461	.468	.422	.440
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.424	.493	.450	.348	.359	.562	-9.999
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.454	.460	.429	.444	.431	.459	.463
NONDIM. 1ST TIME MOMENT		D >= MEAN	.431	.442	.425	.420	.414	.469	.440
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.272	.246	.232	.292	.300	.238	.297
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.258	.303	.253	.176	.195	.379	-9.999
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.287	.279	.256	.273	.268	.289	.312
NONDIM. 2ND TIME MOMENT		D >= MEAN	.265	.262	.244	.250	.247	.285	.297
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.253	.237	.236	.248	.248	.233	.267
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.246	.224	.205	.193	.238	.249	-9.999
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.257	.236	.232	.230	.256	.261	.262
NONDIM. TIME STD.DEV.		D >= MEAN	.250	.234	.218	.228	.243	.239	.267
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	22	18	12	14	4	4	7
NUMBER OF RAINSTORMS		D >= 2 MEAN	24	7	16	8	4	2	0
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	75	48	51	34	13	10	10
NUMBER OF RAINSTORMS		D >= MEAN	46	25	28	22	8	6	7

TABLE B 4 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN TREYNOR,IA
(C) TIME INTERVAL = 30.0 MIN. (1962-1975)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.291	.296	.253	.593	.304	.247
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.378	.375	.253	.379	.635	.138
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.413	.324	.328	.442	.361	.410
A OF NONDIM. HYETOGRAPH		D >= MEAN	.325	.328	.253	.468	.359	.236
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.424	.423	.383	.531	.439	.409
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.449	.458	.401	.442	.545	.379
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.466	.435	.425	.472	.451	.478
NONDIM. 1ST TIME MOMENT		D >= MEAN	.434	.437	.390	.479	.457	.406
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.257	.248	.220	.341	.263	.255
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.282	.266	.222	.265	.351	.193
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.299	.257	.254	.295	.279	.323
NONDIM. 2ND TIME MOMENT		D >= MEAN	.267	.255	.220	.297	.278	.249
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.244	.243	.230	.213	.226	.281
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.248	.189	.214	.218	.229	.221
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.250	.229	.225	.237	.241	.267
NONDIM. TIME STD.DEV.		D >= MEAN	.246	.221	.224	.216	.227	.275
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	33	20	24	5	15	9
NUMBER OF RAINSTORMS		D >= 2 MEAN	21	14	14	7	3	1
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	100	59	50	21	26	15
NUMBER OF RAINSTORMS		D >= MEAN	54	34	38	12	18	10

TABLE B 4 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION TREYNOR,IA
(D) TIME INTERVAL = 60.0 MIN. (1962-1975)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.383	.287	.225	.333
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.335	.348	.288	.407
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.385	.376	.276	.347
A OF NONDIM. HYETOGRAPH		D >= MEAN	.360	.305	.247	.350
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.458	.414	.387	.441
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.432	.413	.416	.469
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.455	.445	.405	.441
NONDIM. 1ST TIME MOMENT		D >= MEAN	.445	.413	.397	.447
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.291	.235	.207	.256
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.265	.241	.223	.290
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.288	.269	.227	.262
NONDIM. 2ND TIME MOMENT		D >= MEAN	.279	.237	.213	.265
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.252	.216	.218	.224
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.239	.208	.192	.251
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.246	.225	.220	.234
NONDIM. TIME STD.DEV.		D >= MEAN	.246	.213	.209	.230
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	33	32	13	16
NUMBER OF RAINSTORMS		D >= 2 MEAN	31	13	7	5
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	108	81	36	36
NUMBER OF RAINSTORMS		D >= MEAN	64	45	20	21

TABLE B 5 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION MCCREDIE,MO
(A) TIME INTERVAL = 5.0 MIN. (1941-1974)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.378	.364	.347	.294	.373	.365	.302
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.451	.333	.330	.219	.356	.279	.299
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.442	.378	.357	.308	.363	.367	.344
A OF NONDIM. HYETOGRAPH		D >= MEAN	.400	.352	.340	.262	.364	.317	.300
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.459	.441	.436	.410	.453	.448	.391
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.487	.430	.430	.387	.449	.379	.394
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.481	.448	.441	.420	.444	.432	.420
NONDIM. 1ST TIME MOMENT		D >= MEAN	.467	.437	.434	.400	.451	.409	.393
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.292	.274	.264	.241	.274	.298	.228
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.320	.253	.251	.202	.265	.223	.248
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.314	.275	.270	.252	.273	.280	.265
NONDIM. 2ND TIME MOMENT		D >= MEAN	.301	.266	.259	.224	.269	.256	.241
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.272	.243	.241	.234	.233	.227	.230
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.264	.232	.228	.203	.220	.207	.244
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.271	.242	.245	.231	.243	.238	.256
NONDIM. TIME STD.DEV.		D >= MEAN	.270	.238	.236	.221	.226	.216	.239
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	48	41	33	27	23	15	6
NUMBER OF RAINSTORMS		D >= 2 MEAN	21	25	21	20	27	19	11
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	117	108	92	77	81	58	35
NUMBER OF RAINSTORMS		D >= MEAN	69	66	54	47	50	34	17

TABLE B 5 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION MCCREDIE,MO
(B) TIME INTERVAL = 15.0 MIN. (1941-1974)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.470	.278	.328	.295	.180	.413	.283
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.375	.290	.261	.278	.346	.299	.244
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.412	.335	.329	.319	.272	.432	.280
A OF NONDIM. HYETOGRAPH		D >= MEAN	.427	.284	.292	.287	.240	.377	.270
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.489	.408	.432	.418	.355	.471	.376
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.450	.409	.395	.409	.443	.404	.355
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.467	.431	.429	.420	.407	.470	.392
NONDIM. 1ST TIME MOMENT		D >= MEAN	.471	.409	.412	.414	.387	.450	.369
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.322	.239	.262	.251	.202	.302	.224
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.283	.223	.215	.234	.269	.247	.201
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.301	.253	.254	.255	.238	.301	.240
NONDIM. 2ND TIME MOMENT		D >= MEAN	.305	.231	.237	.244	.226	.284	.216
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.253	.224	.236	.242	.236	.261	.230
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.249	.201	.210	.227	.235	.244	.209
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.255	.223	.226	.243	.237	.246	.254
NONDIM. TIME STD.DEV.		D >= MEAN	.251	.212	.222	.236	.236	.256	.223
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	70	44	41	27	14	13	6
NUMBER OF RAINSTORMS		D >= 2 MEAN	58	45	47	20	8	6	3
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	228	138	147	75	34	34	17
NUMBER OF RAINSTORMS		D >= MEAN	128	89	88	47	22	19	9

TABLE B 5 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN MCCREDIE,MO
(C) TIME INTERVAL = 30.0 MIN. (1941-1974)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.328	.316	.349	.309	.272	.353
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.338	.316	.217	.350	.207	.223
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.359	.343	.325	.338	.315	.318
A OF NONDIM. HYETOGRAPH		D >= MEAN	.333	.316	.293	.320	.254	.301
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.433	.424	.439	.416	.412	.429
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.434	.413	.381	.426	.369	.353
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.445	.432	.426	.430	.427	.420
NONDIM. 1ST TIME MOMENT		D >= MEAN	.433	.420	.414	.418	.400	.398
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.266	.249	.264	.245	.240	.259
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.267	.235	.206	.246	.205	.193
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.278	.256	.252	.254	.255	.257
NONDIM. 2ND TIME MOMENT		D >= MEAN	.267	.244	.239	.245	.230	.232
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.240	.223	.230	.221	.235	.241
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.235	.203	.208	.189	.219	.208
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.245	.223	.226	.222	.234	.252
NONDIM. TIME STD.DEV.		D >= MEAN	.238	.215	.221	.213	.230	.227
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	85	76	61	39	28	9
NUMBER OF RAINSTORMS		D >= 2 MEAN	83	47	45	14	11	6
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	272	209	167	88	69	33
NUMBER OF RAINSTORMS		D >= MEAN	168	123	106	53	39	15

TABLE B 5 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION MCCREDIE,MO
(D) TIME INTERVAL = 60.0 MIN. (1941-1974)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.332	.346	.329	.308
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.302	.339	.205	.232
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.363	.359	.321	.338
A OF NONDIM. HYETOGRAPH		D >= MEAN	.319	.343	.292	.277
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.437	.434	.432	.427
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.420	.421	.389	.369
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.445	.437	.432	.431
NONDIM. 1ST TIME MOMENT		D >= MEAN	.430	.429	.419	.403
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.270	.254	.252	.256
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.254	.239	.203	.214
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.279	.259	.249	.262
NONDIM. 2ND TIME MOMENT		D >= MEAN	.263	.248	.238	.239
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.243	.212	.227	.242
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.237	.199	.206	.224
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.244	.216	.222	.233
NONDIM. TIME STD.DEV.		D >= MEAN	.240	.207	.221	.235
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	110	83	63	34
NUMBER OF RAINSTORMS		D >= 2 MEAN	87	50	27	24
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	339	221	138	102
NUMBER OF RAINSTORMS		D >= MEAN	197	133	90	58

TABLE B 6 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION HASTINGS, NE
(A) TIME INTERVAL = 5.0 MIN. (1938-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.558	.371	.486	.236	.305	.435	.723
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.451	.318	.368	.302	.447	.343	.216
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.486	.391	.337	.249	.368	.412	.310
A OF NONDIM. HYETOGRAPH		D >= MEAN	.517	.340	.431	.253	.364	.364	.406
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.519	.452	.494	.392	.435	.478	.574
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.484	.421	.456	.434	.480	.428	.373
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.495	.457	.435	.397	.445	.458	.399
NONDIM. 1ST TIME MOMENT		D >= MEAN	.506	.434	.476	.403	.453	.439	.449
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.353	.270	.315	.205	.253	.302	.380
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.317	.250	.258	.230	.288	.257	.194
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.329	.274	.253	.212	.269	.286	.231
NONDIM. 2ND TIME MOMENT		D >= MEAN	.339	.258	.288	.211	.268	.268	.264
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.269	.236	.232	.195	.241	.255	.222
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.268	.234	.206	.197	.215	.224	.195
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.271	.234	.223	.204	.244	.238	.218
NONDIM. TIME STD.DEV.		D >= MEAN	.269	.235	.220	.196	.230	.231	.205
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	13	7	9	15	10	3	3
NUMBER OF RAINSTORMS		D >= 2 MEAN	8	10	8	5	7	10	5
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	37	32	34	30	34	19	13
NUMBER OF RAINSTORMS		D >= MEAN	21	17	17	20	17	13	8

TABLE B 6 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION HASTINGS, NE
(B) TIME INTERVAL = 15.0 MIN. (1938-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.447	.318	.423	.225	.197	.372	.260
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.272	.283	.338	.238	.013	0.000	.015
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.372	.321	.403	.245	.219	.207	.069
A OF NONDIM. HYETOGRAPH		D >= MEAN	.362	.302	.387	.228	.164	.265	.138
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.474	.430	.461	.381	.347	.436	.419
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.415	.400	.436	.380	.277	.301	.295
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.449	.425	.458	.383	.368	.376	.324
NONDIM. 1ST TIME MOMENT		D >= MEAN	.445	.416	.450	.381	.335	.397	.357
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.308	.238	.267	.205	.186	.240	.280
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.248	.219	.242	.201	.122	.145	.136
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.283	.241	.270	.212	.207	.204	.178
NONDIM. 2ND TIME MOMENT		D >= MEAN	.278	.229	.256	.204	.175	.213	.208
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.243	.202	.193	.212	.213	.182	.309
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.232	.195	.192	.196	.201	.231	.212
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.247	.213	.206	.217	.219	.219	.254
NONDIM. TIME STD.DEV.		D >= MEAN	.238	.199	.192	.207	.211	.196	.260
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	22	19	18	16	14	5	2
NUMBER OF RAINSTORMS		D >= 2 MEAN	21	16	13	6	3	2	2
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	72	56	45	29	28	13	8
NUMBER OF RAINSTORMS		D >= MEAN	43	35	31	22	17	7	4

TABLE B 6 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN HASTINGS, NE
(C) TIME INTERVAL = 30.0 MIN. (1938-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.474	.366	.279	.224	.303	.297
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.352	.320	.175	.095	.156	.073
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.420	.323	.297	.278	.259	.281
A OF NONDIM. HYETOGRAPH		D >= MEAN	.426	.343	.241	.194	.268	.207
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.489	.443	.408	.383	.408	.415
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.436	.434	.356	.305	.349	.333
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.465	.433	.408	.407	.392	.407
NONDIM. 1ST TIME MOMENT		D >= MEAN	.468	.438	.389	.365	.394	.382
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.322	.257	.231	.210	.234	.254
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.269	.245	.182	.142	.181	.166
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.299	.249	.237	.235	.220	.239
NONDIM. 2ND TIME MOMENT		D >= MEAN	.301	.251	.213	.195	.221	.219
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.230	.216	.219	.219	.200	.265
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.220	.197	.201	.191	.213	.228
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.237	.214	.226	.216	.212	.244
NONDIM. TIME STD.DEV.		D >= MEAN	.226	.206	.212	.213	.203	.250
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	38	19	21	20	13	6
NUMBER OF RAINSTORMS		D >= 2 MEAN	25	20	12	6	4	4
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	97	69	61	43	20	16
NUMBER OF RAINSTORMS		D >= MEAN	63	39	33	26	17	10

TABLE B 6 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION HASTINGS, NE
(D) TIME INTERVAL = 60.0 MIN. (1938-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.395	.220	.222	.392
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.430	.192	.247	.095
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.429	.254	.263	.313
A OF NONDIM. HYETOGRAPH		D >= MEAN	.414	.212	.230	.289
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.463	.382	.374	.453
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.467	.364	.379	.342
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.472	.395	.394	.419
NONDIM. 1ST TIME MOMENT		D >= MEAN	.465	.377	.376	.415
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.296	.206	.206	.274
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.301	.188	.207	.168
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.305	.218	.220	.242
NONDIM. 2ND TIME MOMENT		D >= MEAN	.299	.201	.206	.238
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.246	.211	.224	.215
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.227	.197	.181	.214
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.242	.215	.213	.217
NONDIM. TIME STD.DEV.		D >= MEAN	.236	.207	.209	.214
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	30	42	26	17
NUMBER OF RAINSTORMS		D >= 2 MEAN	34	17	14	9
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	106	90	75	49
NUMBER OF RAINSTORMS		D >= MEAN	64	59	40	26

TABLE B 7 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION ALBUQUERQUE, NM
(A) TIME INTERVAL = 5.0 MIN. (1939-1972)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.454	.336	.350	.383	.299	.485	.500
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.195	.190	.191	.332	.221	.140	.132
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.457	.399	.391	.380	.332	.444	.435
A OF NONDIM. HYETOGRAPH		D >= MEAN	.374	.277	.292	.367	.248	.408	.255
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.485	.436	.433	.451	.405	.487	.500
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.395	.378	.376	.442	.375	.379	.364
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.485	.460	.454	.455	.428	.477	.475
NONDIM. 1ST TIME MOMENT		D >= MEAN	.457	.413	.412	.448	.386	.463	.409
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.318	.266	.259	.276	.241	.320	.333
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.229	.202	.199	.256	.210	.202	.200
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.319	.284	.279	.278	.263	.312	.307
NONDIM. 2ND TIME MOMENT		D >= MEAN	.290	.240	.237	.270	.221	.294	.244
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.279	.257	.242	.247	.248	.265	.289
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.257	.225	.221	.236	.232	.236	.253
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.277	.252	.252	.250	.259	.269	.274
NONDIM. TIME STD.DEV.		D >= MEAN	.272	.244	.235	.244	.237	.259	.265
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	18	15	14	18	8	7	1
NUMBER OF RAINSTORMS		D >= 2 MEAN	8	10	8	8	15	2	2
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	63	53	43	40	44	20	8
NUMBER OF RAINSTORMS		D >= MEAN	26	25	22	26	23	9	3

TABLE B 7 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION ALBUQUERQUE, NM
(B) TIME INTERVAL = 15.0 MIN. (1939-1972)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.438	.408	.285	.168	.223	.909	0.000
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.307	.342	.165	.303	.249	0.000	.076
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.450	.405	.290	.231	.378	.243	.297
A OF NONDIM. HYETOGRAPH		D >= MEAN	.382	.382	.228	.213	.227	.455	.025
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.476	.466	.419	.355	.375	.636	.281
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.427	.427	.351	.404	.416	.225	.359
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.481	.462	.409	.370	.445	.374	.412
NONDIM. 1ST TIME MOMENT		D >= MEAN	.455	.450	.386	.371	.381	.431	.307
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.309	.287	.237	.199	.233	.432	.130
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.261	.246	.179	.209	.262	.155	.240
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.314	.282	.235	.211	.289	.223	.263
NONDIM. 2ND TIME MOMENT		D >= MEAN	.288	.271	.209	.202	.237	.294	.166
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.265	.235	.226	.235	.279	.164	.223
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.248	.212	.210	.168	.297	.323	.333
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.265	.233	.229	.227	.276	.246	.272
NONDIM. TIME STD.DEV.		D >= MEAN	.258	.226	.219	.213	.282	.244	.260
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	38	26	14	8	6	1	2
NUMBER OF RAINSTORMS		D >= 2 MEAN	29	17	13	4	1	1	1
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	133	69	45	22	13	6	5
NUMBER OF RAINSTORMS		D >= MEAN	67	43	27	12	7	2	3

TABLE B 7 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN ALBUQUERQUE, NM
(C) TIME INTERVAL = 30.0 MIN. (1939-1972)

PARAMETER		DEPTH GROUP		RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >=	MEAN	.367	.334	.211	.468	0.000	0.000
A OF NONDIM. HYETOGRAPH		D >= 2	MEAN	.283	.306	.147	0.000	.281	.472
A OF NONDIM. HYETOGRAPH		D >= 0.5	MEAN	.383	.369	.321	.392	.126	.333
A OF NONDIM. HYETOGRAPH		D >=	MEAN	.332	.321	.188	.351	.210	.157
NONDIM. 1ST TIME MOMENT	2MEAN>	D >=	MEAN	.448	.427	.368	.489	.270	.245
NONDIM. 1ST TIME MOMENT		D >= 2	MEAN	.413	.414	.339	.293	.398	.491
NONDIM. 1ST TIME MOMENT		D >= 0.5	MEAN	.454	.441	.415	.453	.338	.411
NONDIM. 1ST TIME MOMENT		D >=	MEAN	.434	.421	.357	.440	.366	.327
NONDIM. 2ND TIME MOMENT	2MEAN>	D >=	MEAN	.282	.251	.207	.305	.143	.121
NONDIM. 2ND TIME MOMENT		D >= 2	MEAN	.246	.233	.167	.124	.232	.276
NONDIM. 2ND TIME MOMENT		D >= 0.5	MEAN	.287	.265	.242	.281	.180	.258
NONDIM. 2ND TIME MOMENT		D >=	MEAN	.267	.242	.192	.260	.209	.172
NONDIM. TIME STD.DEV.	2MEAN>	D >=	MEAN	.250	.230	.225	.240	.264	.233
NONDIM. TIME STD.DEV.		D >= 2	MEAN	.235	.198	.200	.183	.237	.187
NONDIM. TIME STD.DEV.		D >= 0.5	MEAN	.253	.229	.227	.247	.236	.244
NONDIM. TIME STD.DEV.		D >=	MEAN	.243	.216	.216	.225	.243	.218
NUMBER OF RAINSTORMS	2MEAN>	D >=	MEAN	48	23	12	9	1	2
NUMBER OF RAINSTORMS		D >= 2	MEAN	34	19	7	3	3	1
NUMBER OF RAINSTORMS		D >= 0.5	MEAN	151	69	40	25	8	6
NUMBER OF RAINSTORMS		D >=	MEAN	82	42	19	12	4	3

TABLE B 7 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION ALBUQUERQUE, NM
(D) TIME INTERVAL = 60.0 MIN. (1939-1972)

PARAMETER		DEPTH GROUP		RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >=	MEAN	.425	.411	.365	.300
A OF NONDIM. HYETOGRAPH		D >= 2	MEAN	.276	.274	.203	.149
A OF NONDIM. HYETOGRAPH		D >= 0.5	MEAN	.363	.387	.337	.299
A OF NONDIM. HYETOGRAPH		D >=	MEAN	.359	.357	.314	.250
NONDIM. 1ST TIME MOMENT	2MEAN>	D >=	MEAN	.467	.466	.440	.426
NONDIM. 1ST TIME MOMENT		D >= 2	MEAN	.410	.376	.381	.332
NONDIM. 1ST TIME MOMENT		D >= 0.5	MEAN	.445	.443	.434	.420
NONDIM. 1ST TIME MOMENT		D >=	MEAN	.442	.430	.421	.394
NONDIM. 2ND TIME MOMENT	2MEAN>	D >=	MEAN	.300	.281	.269	.262
NONDIM. 2ND TIME MOMENT		D >= 2	MEAN	.234	.194	.194	.173
NONDIM. 2ND TIME MOMENT		D >= 0.5	MEAN	.278	.264	.256	.245
NONDIM. 2ND TIME MOMENT		D >=	MEAN	.275	.247	.245	.232
NONDIM. TIME STD.DEV.	2MEAN>	D >=	MEAN	.242	.228	.237	.248
NONDIM. TIME STD.DEV.		D >= 2	MEAN	.224	.177	.197	.224
NONDIM. TIME STD.DEV.		D >= 0.5	MEAN	.241	.223	.230	.236
NONDIM. TIME STD.DEV.		D >=	MEAN	.234	.208	.225	.240
NUMBER OF RAINSTORMS	2MEAN>	D >=	MEAN	52	17	13	6
NUMBER OF RAINSTORMS		D >= 2	MEAN	42	11	6	3
NUMBER OF RAINSTORMS		D >= 0.5	MEAN	149	63	30	19
NUMBER OF RAINSTORMS		D >=	MEAN	94	28	19	9

TABLE B 8 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION COSHOCTON,OH
(A) TIME INTERVAL = 5.0 MIN. (1937-1978)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.394	.277	.279	.270	.305	.350	.496
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.357	.416	.323	.272	.234	.205	.596
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.411	.353	.353	.298	.319	.309	.472
A OF NONDIM. HYETOGRAPH		D >= MEAN	.378	.355	.299	.271	.267	.285	.542
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.462	.419	.406	.405	.400	.437	.499
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.448	.467	.428	.400	.391	.344	.527
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.468	.446	.439	.419	.421	.415	.477
NONDIM. 1ST TIME MOMENT		D >= MEAN	.456	.446	.416	.402	.395	.395	.512
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.296	.241	.232	.238	.239	.280	.322
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.281	.284	.245	.220	.211	.204	.353
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.302	.269	.264	.249	.252	.263	.311
NONDIM. 2ND TIME MOMENT		D >= MEAN	.289	.265	.238	.229	.224	.246	.336
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.261	.239	.221	.239	.230	.258	.245
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.262	.232	.216	.210	.210	.220	.230
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.264	.241	.233	.240	.236	.252	.247
NONDIM. TIME STD.DEV.		D >= MEAN	.261	.235	.218	.223	.219	.241	.238
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	72	44	53	32	42	27	8
NUMBER OF RAINSTORMS		D >= 2 MEAN	54	56	45	39	49	22	7
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	241	177	171	126	153	80	26
NUMBER OF RAINSTORMS		D >= MEAN	126	100	96	71	91	49	15

TABLE B 8 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION COSHOCTON,OH
(B) TIME INTERVAL = 15.0 MIN. (1937-1978)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.339	.288	.360	.255	.194	.552	.553
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.367	.232	.259	.290	.248	.650	.184
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.383	.319	.349	.289	.236	.447	.546
A OF NONDIM. HYETOGRAPH		D >= MEAN	.353	.264	.309	.274	.219	.597	.447
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.434	.409	.436	.394	.367	.528	.491
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.444	.383	.400	.404	.387	.550	.380
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.454	.422	.439	.407	.375	.479	.505
NONDIM. 1ST TIME MOMENT		D >= MEAN	.439	.398	.418	.399	.377	.538	.459
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.267	.232	.257	.230	.216	.354	.362
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.277	.205	.224	.235	.209	.377	.202
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.287	.247	.262	.242	.213	.308	.342
NONDIM. 2ND TIME MOMENT		D >= MEAN	.272	.220	.241	.233	.213	.365	.302
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.241	.219	.219	.241	.211	.243	.247
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.244	.203	.210	.219	.200	.243	.222
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.250	.223	.228	.239	.215	.252	.256
NONDIM. TIME STD.DEV.		D >= MEAN	.243	.212	.215	.229	.206	.243	.240
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	100	89	57	19	11	6	5
NUMBER OF RAINSTORMS		D >= 2 MEAN	101	66	57	22	10	5	2
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	360	239	224	79	37	28	15
NUMBER OF RAINSTORMS		D >= MEAN	201	155	114	41	21	11	7

TABLE B 8 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN COSHOCTON,OH
(C) TIME INTERVAL = 30.0 MIN. (1937-1978)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.337	.313	.286	.263	.377	.277
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.292	.277	.268	.188	.339	.320
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.328	.342	.326	.255	.384	.403
A OF NONDIM. HYETOGRAPH		D >= MEAN	.314	.294	.280	.241	.366	.289
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.431	.418	.397	.396	.455	.407
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.414	.399	.400	.360	.416	.420
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.431	.430	.423	.394	.453	.459
NONDIM. 1ST TIME MOMENT		D >= MEAN	.422	.408	.398	.386	.444	.411
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.265	.250	.227	.229	.292	.239
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.247	.218	.221	.187	.249	.251
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.265	.255	.251	.221	.285	.289
NONDIM. 2ND TIME MOMENT		D >= MEAN	.256	.233	.225	.217	.280	.242
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.237	.217	.219	.213	.243	.239
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.236	.210	.206	.197	.223	.238
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.243	.221	.230	.215	.249	.244
NONDIM. TIME STD.DEV.		D >= MEAN	.236	.213	.215	.208	.237	.239
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	122	65	73	32	20	12
NUMBER OF RAINSTORMS		D >= 2 MEAN	122	74	39	13	8	5
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	416	251	200	92	65	32
NUMBER OF RAINSTORMS		D >= MEAN	244	139	112	45	28	17

TABLE B 8 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION COSHOCTON,OH
(D) TIME INTERVAL = 60.0 MIN. (1937-1978)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.327	.261	.326	.351
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.335	.239	.291	.286
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.347	.291	.341	.365
A OF NONDIM. HYETOGRAPH		D >= MEAN	.331	.253	.313	.326
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.433	.399	.421	.441
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.429	.378	.391	.388
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.440	.409	.429	.444
NONDIM. 1ST TIME MOMENT		D >= MEAN	.432	.391	.410	.421
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.267	.225	.256	.270
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.263	.205	.220	.224
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.273	.236	.259	.269
NONDIM. 2ND TIME MOMENT		D >= MEAN	.265	.218	.243	.252
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.242	.217	.229	.235
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.221	.202	.194	.217
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.238	.222	.227	.230
NONDIM. TIME STD.DEV.		D >= MEAN	.232	.214	.216	.228
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	128	84	45	32
NUMBER OF RAINSTORMS		D >= 2 MEAN	108	50	26	20
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	401	239	140	113
NUMBER OF RAINSTORMS		D >= MEAN	236	134	71	52

TABLE B 9 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION CHEROKEE, OK
(A) TIME INTERVAL = 5.0 MIN. (1941-1967)

PARAMETER		DEPTH GROUP		RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >=	MEAN	.335	.419	.242	.300	.079	.259	0.000
A OF NONDIM. HYETOGRAPH		D >= 2	MEAN	.234	.242	.173	.255	.067	.367	.295
A OF NONDIM. HYETOGRAPH		D >= 0.5	MEAN	.362	.358	.293	.286	.083	.259	.206
A OF NONDIM. HYETOGRAPH		D >=	MEAN	.277	.345	.209	.271	.074	.300	.148
NONDIM. 1ST TIME MOMENT	2MEAN>	D >=	MEAN	.442	.457	.388	.423	.301	.393	.280
NONDIM. 1ST TIME MOMENT		D >= 2	MEAN	.400	.395	.353	.399	.343	.432	.364
NONDIM. 1ST TIME MOMENT		D >= 0.5	MEAN	.450	.444	.412	.421	.316	.400	.345
NONDIM. 1ST TIME MOMENT		D >=	MEAN	.418	.437	.371	.407	.321	.408	.322
NONDIM. 2ND TIME MOMENT	2MEAN>	D >=	MEAN	.275	.297	.225	.249	.147	.219	.155
NONDIM. 2ND TIME MOMENT		D >= 2	MEAN	.233	.226	.190	.223	.166	.254	.225
NONDIM. 2ND TIME MOMENT		D >= 0.5	MEAN	.284	.275	.248	.245	.157	.228	.209
NONDIM. 2ND TIME MOMENT		D >=	MEAN	.251	.267	.208	.232	.156	.232	.190
NONDIM. TIME STD.DEV.	2MEAN>	D >=	MEAN	.266	.260	.250	.248	.215	.218	.274
NONDIM. TIME STD.DEV.		D >= 2	MEAN	.241	.244	.227	.223	.212	.188	.220
NONDIM. TIME STD.DEV.		D >= 0.5	MEAN	.265	.260	.255	.242	.222	.222	.249
NONDIM. TIME STD.DEV.		D >=	MEAN	.252	.254	.239	.232	.214	.207	.247
NUMBER OF RAINSTORMS	2MEAN>	D >=	MEAN	12	18	14	6	10	10	3
NUMBER OF RAINSTORMS		D >= 2	MEAN	16	3	13	11	9	6	3
NUMBER OF RAINSTORMS		D >= 0.5	MEAN	70	79	47	36	31	21	10
NUMBER OF RAINSTORMS		D >=	MEAN	28	31	27	17	19	16	6

TABLE B 9 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION CHEROKEE, OK
(B) TIME INTERVAL = 15.0 MIN. (1941-1967)

PARAMETER		DEPTH GROUP		RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >=	MEAN	.353	.216	.156	.190	.234	.227	.174
A OF NONDIM. HYETOGRAPH		D >= 2	MEAN	.229	.208	.202	.229	.111	.096	.615
A OF NONDIM. HYETOGRAPH		D >= 0.5	MEAN	.301	.235	.206	.260	.212	.170	.233
A OF NONDIM. HYETOGRAPH		D >=	MEAN	.292	.212	.180	.203	.187	.171	.262
NONDIM. 1ST TIME MOMENT	2MEAN>	D >=	MEAN	.442	.381	.355	.340	.369	.323	.383
NONDIM. 1ST TIME MOMENT		D >= 2	MEAN	.399	.385	.368	.382	.267	.356	.538
NONDIM. 1ST TIME MOMENT		D >= 0.5	MEAN	.427	.395	.373	.386	.346	.356	.377
NONDIM. 1ST TIME MOMENT		D >=	MEAN	.421	.383	.362	.354	.329	.337	.414
NONDIM. 2ND TIME MOMENT	2MEAN>	D >=	MEAN	.276	.209	.189	.189	.209	.199	.195
NONDIM. 2ND TIME MOMENT		D >= 2	MEAN	.232	.206	.187	.195	.143	.191	.322
NONDIM. 2ND TIME MOMENT		D >= 0.5	MEAN	.261	.220	.201	.217	.195	.203	.207
NONDIM. 2ND TIME MOMENT		D >=	MEAN	.254	.208	.188	.191	.184	.196	.221
NONDIM. TIME STD.DEV.	2MEAN>	D >=	MEAN	.251	.225	.223	.217	.233	.245	.209
NONDIM. TIME STD.DEV.		D >= 2	MEAN	.236	.215	.185	.190	.219	.247	.179
NONDIM. TIME STD.DEV.		D >= 0.5	MEAN	.252	.227	.210	.216	.231	.242	.210
NONDIM. TIME STD.DEV.		D >=	MEAN	.243	.219	.203	.208	.228	.246	.203
NUMBER OF RAINSTORMS	2MEAN>	D >=	MEAN	26	24	16	14	8	4	4
NUMBER OF RAINSTORMS		D >= 2	MEAN	25	27	7	7	5	3	1
NUMBER OF RAINSTORMS		D >= 0.5	MEAN	96	75	51	40	24	13	10
NUMBER OF RAINSTORMS		D >=	MEAN	51	51	33	21	13	7	5

TABLE B 9 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN CHEROKEE, OK
(C) TIME INTERVAL = 30.0 MIN. (1941-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.287	.285	.176	.198	.182	.440
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.177	.194	.305	.108	.220	0.000
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.265	.237	.252	.163	.183	.327
A OF NONDIM. HYETOGRAPH		D >= MEAN	.223	.246	.227	.161	.194	.305
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.420	.405	.334	.356	.335	.463
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.369	.360	.422	.287	.366	.214
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.407	.382	.389	.337	.349	.414
NONDIM. 1ST TIME MOMENT		D >= MEAN	.390	.385	.368	.327	.345	.387
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.253	.230	.178	.185	.181	.275
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.202	.190	.235	.151	.209	.082
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.241	.210	.216	.175	.191	.239
NONDIM. 2ND TIME MOMENT		D >= MEAN	.223	.212	.201	.171	.190	.215
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.246	.203	.216	.205	.212	.210
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.227	.209	.177	.226	.203	.169
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.243	.212	.211	.209	.216	.208
NONDIM. TIME STD.DEV.		D >= MEAN	.235	.205	.201	.214	.209	.198
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	24	35	25	13	15	9
NUMBER OF RAINSTORMS		D >= 2 MEAN	34	27	16	9	7	4
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	100	94	73	44	32	24
NUMBER OF RAINSTORMS		D >= MEAN	58	62	41	22	22	13

TABLE B 9 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION CHEROKEE, OK
(D) TIME INTERVAL = 60.0 MIN. (1941-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.292	.224	.230	.292
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.191	.312	.110	.149
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.246	.243	.226	.253
A OF NONDIM. HYETOGRAPH		D >= MEAN	.246	.273	.187	.250
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.415	.366	.371	.415
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.372	.413	.316	.282
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.397	.380	.377	.386
NONDIM. 1ST TIME MOMENT		D >= MEAN	.395	.392	.351	.376
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.248	.192	.204	.229
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.205	.229	.151	.138
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.230	.206	.205	.213
NONDIM. 2ND TIME MOMENT		D >= MEAN	.229	.212	.185	.202
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.229	.202	.217	.198
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.218	.189	.200	.170
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.230	.205	.215	.205
NONDIM. TIME STD.DEV.		D >= MEAN	.224	.195	.211	.190
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	46	22	28	24
NUMBER OF RAINSTORMS		D >= 2 MEAN	38	27	16	10
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	127	94	80	59
NUMBER OF RAINSTORMS		D >= MEAN	84	49	44	34

TABLE B10 APR-OCT [illegible] PRECIPITATION DATA AT STATION GUTHRIE, OK
(A) TIME INTERVAL = 5.0 MIN. (1937-1956)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.489	.409	.427	.467	.314	.466	.020
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.368	.317	.283	.241	.383	.303	.360
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.445	.433	.398	.401	.362	.341	.154
A OF NONDIM. HYETOGRAPH		D >= MEAN	.445	.370	.347	.347	.355	.392	.133
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.496	.466	.472	.476	.418	.470	.270
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.452	.436	.408	.409	.457	.434	.453
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.481	.476	.458	.462	.448	.435	.345
NONDIM. 1ST TIME MOMENT		D >= MEAN	.480	.453	.436	.441	.441	.454	.331
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.329	.288	.290	.303	.250	.279	.136
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.286	.254	.229	.217	.270	.234	.241
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.314	.300	.282	.280	.271	.252	.181
NONDIM. 2ND TIME MOMENT		D >= MEAN	.313	.274	.256	.257	.262	.259	.171
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.267	.250	.241	.242	.235	.182	.235
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.261	.239	.216	.206	.208	.190	.182
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.269	.253	.239	.231	.233	.220	.223
NONDIM. TIME STD.DEV.		D >= MEAN	.265	.246	.227	.223	.219	.186	.218
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	39	30	23	23	15	6	4
NUMBER OF RAINSTORMS		D >= 2 MEAN	22	22	29	26	22	5	2
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	137	146	92	70	64	27	7
NUMBER OF RAINSTORMS		D >= MEAN	61	52	52	49	37	11	6

TABLE B10 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION GUTHRIE, OK
(B) TIME INTERVAL = 15.0 MIN. (1937-1956)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.402	.415	.239	.128	.505	.041	.312
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.315	.301	.223	.081	0.000	.262	.847
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.409	.372	.272	.213	.435	.236	.409
A OF NONDIM. HYETOGRAPH		D >= MEAN	.361	.357	.231	.114	.404	.188	.419
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.463	.471	.364	.344	.512	.347	.413
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.428	.418	.390	.311	.265	.421	.616
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.465	.451	.403	.381	.474	.399	.450
NONDIM. 1ST TIME MOMENT		D >= MEAN	.446	.444	.378	.334	.463	.396	.454
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.296	.286	.191	.174	.333	.153	.223
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.261	.228	.197	.149	.129	.225	.427
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.298	.268	.221	.208	.302	.224	.266
NONDIM. 2ND TIME MOMENT		D >= MEAN	.280	.256	.194	.166	.293	.201	.264
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.256	.219	.188	.211	.221	.180	.194
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.234	.198	.181	.209	.241	.213	.219
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.253	.221	.200	.222	.231	.238	.213
NONDIM. TIME STD.DEV.		D >= MEAN	.246	.208	.184	.211	.225	.202	.199
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	41	31	23	6	8	1	4
NUMBER OF RAINSTORMS		D >= 2 MEAN	36	33	24	6	2	2	1
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	143	95	72	35	13	9	8
NUMBER OF RAINSTORMS		D >= MEAN	77	64	47	20	10	3	5

TABLE B10 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN GUTHRIE, OK
(C) TIME INTERVAL = 30.0 MIN. (1937-1956)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.336	.252	.334	.242	.060	.161
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.236	.347	.162	.052	.078	.331
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.311	.354	.309	.303	.259	.305
A OF NONDIM. HYETOGRAPH		D >= MEAN	.279	.304	.252	.173	.065	.225
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.434	.394	.410	.379	.309	.371
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.388	.434	.349	.297	.311	.431
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.421	.440	.411	.411	.391	.426
NONDIM. 1ST TIME MOMENT		D >= MEAN	.408	.417	.381	.350	.309	.393
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.267	.212	.233	.218	.151	.190
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.222	.247	.182	.134	.135	.254
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.254	.258	.237	.241	.216	.243
NONDIM. 2ND TIME MOMENT		D >= MEAN	.241	.231	.209	.188	.147	.214
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.237	.198	.194	.210	.220	.212
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.220	.200	.202	.196	.179	.206
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.232	.211	.205	.204	.214	.218
NONDIM. TIME STD.DEV.		D >= MEAN	.227	.199	.198	.204	.210	.210
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	31	20	23	14	12	5
NUMBER OF RAINSTORMS		D >= 2 MEAN	41	25	21	8	4	3
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	115	76	70	35	28	14
NUMBER OF RAINSTORMS		D >= MEAN	72	45	44	22	16	8

TABLE B10 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION GUTHRIE, OK
(D) TIME INTERVAL = 60.0 MIN. (1937-1956)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.271	.158	.380	.234
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.311	.130	.132	.184
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.338	.246	.282	.307
A OF NONDIM. HYETOGRAPH		D >= MEAN	.291	.150	.276	.216
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.396	.352	.446	.388
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.419	.339	.321	.391
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.429	.392	.394	.421
NONDIM. 1ST TIME MOMENT		D >= MEAN	.407	.349	.394	.389
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.230	.182	.273	.214
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.252	.162	.154	.206
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.262	.218	.223	.241
NONDIM. 2ND TIME MOMENT		D >= MEAN	.241	.176	.224	.211
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.224	.206	.233	.215
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.215	.194	.187	.202
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.227	.207	.214	.212
NONDIM. TIME STD.DEV.		D >= MEAN	.219	.203	.214	.211
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	34	41	21	16
NUMBER OF RAINSTORMS		D >= 2 MEAN	33	16	15	9
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	107	85	57	41
NUMBER OF RAINSTORMS		D >= MEAN	67	57	36	25

TABLE B11 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION DANVILLE, VT
(A) TIME INTERVAL = 5.0 MIN. (1958-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.469	.433	.483	.368	.361	.541	.450
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.444	.368	.384	.343	.332	.327	.055
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.477	.452	.469	.443	.423	.453	.427
A OF NONDIM. HYETOGRAPH		D >= MEAN	.454	.410	.439	.354	.345	.443	.339
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.490	.479	.494	.456	.441	.515	.476
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.481	.443	.455	.433	.421	.442	.327
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.492	.480	.488	.478	.464	.484	.469
NONDIM. 1ST TIME MOMENT		D >= MEAN	.485	.466	.477	.444	.430	.482	.434
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.323	.313	.321	.282	.277	.347	.318
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.315	.275	.283	.263	.256	.270	.171
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.326	.310	.316	.304	.296	.315	.311
NONDIM. 2ND TIME MOMENT		D >= MEAN	.318	.299	.304	.272	.265	.312	.277
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.288	.271	.274	.263	.262	.271	.272
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.283	.260	.262	.232	.236	.260	.245
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.287	.268	.272	.258	.260	.275	.272
NONDIM. TIME STD.DEV.		D >= MEAN	.285	.267	.269	.247	.247	.266	.264
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	6	16	24	13	16	18	18
NUMBER OF RAINSTORMS		D >= 2 MEAN	9	9	19	15	21	15	7
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	38	50	69	57	74	75	41
NUMBER OF RAINSTORMS		D >= MEAN	15	25	43	28	37	33	25

TABLE B11 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION DANVILLE, VT
(B) TIME INTERVAL = 15.0 MIN. (1958-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.401	.408	.375	.371	.512	.489	.574
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.452	.298	.286	.313	.415	.183	.263
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.473	.416	.390	.400	.459	.411	.453
A OF NONDIM. HYETOGRAPH		D >= MEAN	.426	.360	.334	.353	.481	.353	.470
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.466	.455	.455	.458	.495	.473	.550
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.480	.409	.411	.414	.472	.370	.421
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.489	.463	.457	.463	.478	.457	.486
NONDIM. 1ST TIME MOMENT		D >= MEAN	.473	.434	.435	.445	.487	.427	.507
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.299	.286	.276	.286	.329	.315	.397
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.314	.232	.230	.238	.276	.198	.242
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.323	.285	.278	.292	.306	.290	.324
NONDIM. 2ND TIME MOMENT		D >= MEAN	.306	.262	.255	.271	.313	.263	.345
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.273	.249	.241	.257	.235	.266	.246
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.260	.219	.214	.217	.225	.230	.249
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.269	.243	.237	.251	.243	.262	.260
NONDIM. TIME STD.DEV.		D >= MEAN	.267	.236	.229	.244	.232	.250	.247
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	41	44	33	24	15	5	6
NUMBER OF RAINSTORMS		D >= 2 MEAN	37	35	28	11	7	4	3
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	145	160	105	59	37	18	18
NUMBER OF RAINSTORMS		D >= MEAN	78	79	61	35	22	9	9

TABLE B11 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN DANVILLE, VT
(C) TIME INTERVAL = 30.0 MIN. (1958-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.445	.426	.421	.450	.404	.415
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.298	.286	.250	.399	.536	.281
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.428	.412	.378	.412	.437	.421
A OF NONDIM. HYETOGRAPH		D >= MEAN	.372	.358	.356	.430	.442	.380
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.483	.463	.470	.460	.456	.472
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.422	.409	.396	.457	.531	.384
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.473	.461	.453	.456	.477	.462
NONDIM. 1ST TIME MOMENT		D >= MEAN	.453	.437	.441	.459	.478	.449
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.317	.288	.293	.293	.285	.292
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.256	.233	.207	.273	.347	.225
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.306	.284	.274	.285	.304	.290
NONDIM. 2ND TIME MOMENT		D >= MEAN	.286	.262	.260	.285	.303	.275
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.266	.236	.241	.227	.247	.237
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.243	.226	.193	.213	.196	.232
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.261	.238	.234	.236	.249	.247
NONDIM. TIME STD.DEV.		D >= MEAN	.255	.231	.223	.222	.233	.236
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	61	34	42	25	17	20
NUMBER OF RAINSTORMS		D >= 2 MEAN	60	32	26	16	7	7
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	224	126	113	65	43	42
NUMBER OF RAINSTORMS		D >= MEAN	121	66	68	41	24	27

TABLE B11 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION DANVILLE, VT
(D) TIME INTERVAL = 60.0 MIN. (1958-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.414	.313	.355	.354
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.341	.341	.385	.463
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.395	.372	.403	.439
A OF NONDIM. HYETOGRAPH		D >= MEAN	.381	.327	.367	.390
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.468	.420	.433	.442
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.432	.431	.450	.488
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.460	.445	.458	.475
NONDIM. 1ST TIME MOMENT		D >= MEAN	.452	.426	.440	.457
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.302	.242	.255	.259
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.266	.250	.273	.317
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.294	.268	.282	.298
NONDIM. 2ND TIME MOMENT		D >= MEAN	.285	.246	.262	.278
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.255	.220	.227	.221
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.237	.216	.215	.249
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.249	.231	.237	.239
NONDIM. TIME STD.DEV.		D >= MEAN	.246	.218	.222	.230
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	61	39	33	35
NUMBER OF RAINSTORMS		D >= 2 MEAN	52	38	23	17
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	192	139	100	82
NUMBER OF RAINSTORMS		D >= MEAN	113	77	56	52

TABLE B12 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION BLACKSBURG, VA
(A) TIME INTERVAL = 5.0 MIN. (1957-1972)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.477	.448	.504	.336	.387	.520	.500
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.538	.428	.303	.283	.397	.108	.275
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.498	.397	.380	.397	.428	.420	.417
A OF NONDIM. HYETOGRAPH		D >= MEAN	.504	.434	.382	.300	.391	.328	.331
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.492	.483	.501	.421	.455	.507	.500
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.507	.468	.429	.417	.460	.336	.369
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.498	.459	.457	.456	.472	.469	.456
NONDIM. 1ST TIME MOMENT		D >= MEAN	.499	.472	.457	.418	.457	.427	.402
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.326	.313	.327	.246	.282	.341	.333
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.340	.288	.243	.221	.287	.162	.207
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.331	.288	.280	.272	.301	.305	.291
NONDIM. 2ND TIME MOMENT		D >= MEAN	.332	.295	.276	.229	.284	.258	.239
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.238	.255	.259	.227	.254	.284	.288
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.212	.217	.210	.176	.209	.194	.188
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.231	.240	.239	.220	.252	.263	.257
NONDIM. TIME STD.DEV.		D >= MEAN	.227	.227	.229	.193	.235	.242	.213
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	10	5	9	5	9	8	2
NUMBER OF RAINSTORMS		D >= 2 MEAN	8	14	14	10	7	7	6
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	30	36	31	25	27	32	21
NUMBER OF RAINSTORMS		D >= MEAN	18	19	23	15	16	15	8

TABLE B12 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION BLACKSBURG, VA
(B) TIME INTERVAL = 15.0 MIN. (1957-1972)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.585	.605	.466	.430	.327	.474	.480
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.372	.195	.276	.276	.088	.356	.742
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.486	.425	.427	.402	.307	.316	.523
A OF NONDIM. HYETOGRAPH		D >= MEAN	.472	.396	.347	.356	.141	.407	.546
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.528	.531	.471	.478	.442	.439	.493
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.446	.360	.412	.372	.275	.423	.581
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.491	.460	.466	.450	.404	.383	.508
NONDIM. 1ST TIME MOMENT		D >= MEAN	.484	.444	.434	.427	.312	.430	.515
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.361	.355	.298	.306	.279	.273	.331
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.279	.185	.226	.196	.140	.238	.405
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.324	.284	.286	.277	.248	.218	.340
NONDIM. 2ND TIME MOMENT		D >= MEAN	.317	.268	.252	.253	.171	.253	.350
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.222	.223	.237	.254	.281	.199	.281
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.182	.177	.172	.177	.214	.178	.260
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.213	.214	.218	.235	.255	.192	.279
NONDIM. TIME STD.DEV.		D >= MEAN	.201	.199	.196	.217	.229	.187	.276
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	23	23	12	15	2	3	3
NUMBER OF RAINSTORMS		D >= 2 MEAN	26	24	21	14	7	4	1
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	81	76	54	42	20	9	7
NUMBER OF RAINSTORMS		D >= MEAN	49	47	33	29	9	7	4

TABLE B12 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN BLACKSBURG, VA
(C) TIME INTERVAL = 30.0 MIN. (1957-1972)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.564	.475	.499	.307	.172	.573
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.322	.311	.291	.218	.083	.521
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.500	.456	.423	.344	.316	.526
A OF NONDIM. HYETOGRAPH		D >= MEAN	.427	.383	.393	.269	.131	.553
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.524	.492	.495	.399	.327	.524
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.425	.406	.389	.365	.286	.507
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.496	.475	.459	.424	.404	.509
NONDIM. 1ST TIME MOMENT		D >= MEAN	.468	.443	.441	.384	.308	.518
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.358	.312	.313	.230	.159	.350
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.258	.230	.223	.199	.134	.317
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.330	.296	.285	.255	.235	.329
NONDIM. 2ND TIME MOMENT		D >= MEAN	.301	.265	.267	.217	.148	.337
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.223	.235	.239	.216	.178	.261
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.171	.173	.190	.194	.199	.222
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.206	.216	.230	.229	.226	.256
NONDIM. TIME STD.DEV.		D >= MEAN	.194	.200	.214	.207	.188	.246
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	37	24	25	16	7	5
NUMBER OF RAINSTORMS		D >= 2 MEAN	48	31	26	12	6	3
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	140	99	85	46	26	20
NUMBER OF RAINSTORMS		D >= MEAN	85	55	31	28	13	8

TABLE B12 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION BLACKSBURG, VA
(D) TIME INTERVAL = 60.0 MIN. (1957-1972)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.472	.337	.279	.134
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.241	.255	.207	.231
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.429	.413	.330	.268
A OF NONDIM. HYETOGRAPH		D >= MEAN	.341	.361	.256	.165
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.492	.470	.379	.343
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.387	.378	.368	.402
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.468	.457	.414	.406
NONDIM. 1ST TIME MOMENT		D >= MEAN	.433	.432	.375	.362
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.325	.292	.210	.168
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.220	.217	.194	.238
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.302	.282	.239	.231
NONDIM. 2ND TIME MOMENT		D >= MEAN	.256	.261	.205	.190
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.215	.220	.186	.190
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.162	.191	.194	.206
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.199	.215	.204	.214
NONDIM. TIME STD.DEV.		D >= MEAN	.185	.208	.189	.195
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	44	36	25	15
NUMBER OF RAINSTORMS		D >= 2 MEAN	57	26	12	7
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	168	98	58	35
NUMBER OF RAINSTORMS		D >= MEAN	101	62	37	22

TABLE B13 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION MOOREFIELD, WV
(A) TIME INTERVAL = 5.0 MIN. (1958-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 10.0	15.0	20.0	25.0	30.0	60.0	120.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.605	.664	.427	.526	.538	.500	.500
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	-9.999	.379	.281	.228	.300	.372	.503
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.631	.560	.415	.387	.433	.468	.501
A OF NONDIM. HYETOGRAPH		D >= MEAN	.605	.586	.383	.356	.419	.453	.502
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.535	.555	.462	.509	.513	.500	.500
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	-9.999	.460	.408	.374	.398	.415	.493
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.544	.527	.461	.449	.467	.480	.498
NONDIM. 1ST TIME MOMENT		D >= MEAN	.535	.529	.445	.431	.455	.469	.496
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.368	.380	.297	.328	.343	.332	.333
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	-9.999	.288	.227	.198	.230	.263	.321
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.377	.354	.290	.275	.299	.316	.330
NONDIM. 2ND TIME MOMENT		D >= MEAN	.368	.355	.275	.254	.286	.307	.326
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.278	.261	.267	.255	.283	.287	.289
NONDIM. TIME STD.DEV.		D >= 2 MEAN	-9.999	.271	.210	.197	.225	.230	.255
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.275	.269	.255	.242	.267	.274	.280
NONDIM. TIME STD.DEV.		D >= MEAN	.278	.264	.249	.222	.254	.266	.268
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	9	8	9	3	6	12	4
NUMBER OF RAINSTORMS		D >= 2 MEAN	0	3	4	4	6	7	6
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	11	17	18	11	22	31	24
NUMBER OF RAINSTORMS		D >= MEAN	9	11	13	7	12	19	10

TABLE B13 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION MOOREFIELD, WV
(B) TIME INTERVAL = 15.0 MIN. (1958-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 30.0	45.0	60.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.680	.367	.523	.485	.523	.718	-9.999
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.529	.216	.438	.512	.136	.457	.279
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.559	.363	.493	.511	.449	.550	.312
A OF NONDIM. HYETOGRAPH		D >= MEAN	.594	.285	.485	.496	.394	.614	.279
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.571	.422	.508	.490	.508	.575	-9.999
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.505	.366	.480	.465	.372	.486	.400
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.521	.433	.498	.492	.482	.517	.424
NONDIM. 1ST TIME MOMENT		D >= MEAN	.533	.391	.495	.480	.462	.539	.400
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.404	.258	.330	.315	.333	.406	-9.999
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.339	.195	.295	.304	.178	.320	.260
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.354	.261	.320	.321	.306	.348	.276
NONDIM. 2ND TIME MOMENT		D >= MEAN	.367	.224	.314	.310	.282	.372	.260
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.257	.238	.265	.262	.274	.266	-9.999
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.250	.205	.231	.220	.185	.264	.283
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.263	.237	.259	.257	.263	.272	.288
NONDIM. TIME STD.DEV.		D >= MEAN	.253	.220	.250	.245	.244	.265	.283
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	12	10	22	10	4	3	0
NUMBER OF RAINSTORMS		D >= 2 MEAN	16	12	18	7	2	2	2
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	47	38	59	28	13	10	5
NUMBER OF RAINSTORMS		D >= MEAN	28	22	40	17	6	5	2

TABLE B13 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATOIN MOOREFIELD, WV
(C) TIME INTERVAL = 30.0 MIN. (1958-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 60.0	90.0	120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.521	.476	.473	.310	.382	.918
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.312	.114	.274	.259	.069	.077
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.472	.403	.459	.370	.307	.415
A OF NONDIM. HYETOGRAPH		D >= MEAN	.407	.313	.384	.296	.226	.287
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.507	.481	.488	.436	.461	.639
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.415	.346	.387	.413	.299	.341
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.483	.456	.476	.456	.414	.466
NONDIM. 1ST TIME MOMENT		D >= MEAN	.457	.420	.443	.430	.380	.416
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.340	.306	.311	.251	.288	.459
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.248	.179	.231	.242	.133	.206
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.316	.281	.302	.276	.244	.301
NONDIM. 2ND TIME MOMENT		D >= MEAN	.290	.249	.275	.248	.211	.269
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.275	.245	.254	.229	.258	.223
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.224	.226	.224	.251	.188	.291
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.258	.242	.246	.250	.238	.265
NONDIM. TIME STD.DEV.		D >= MEAN	.247	.236	.241	.235	.223	.274
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	25	22	16	11	5	1
NUMBER OF RAINSTORMS		D >= 2 MEAN	30	18	13	4	5	3
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	91	62	52	26	16	9
NUMBER OF RAINSTORMS		D >= MEAN	55	40	29	15	10	4

TABLE B13 APR-OCT RAINSTORMS FROM PRECIPITATION DATA AT STATION MOOREFIELD, WV
(D) TIME INTERVAL = 60.0 MIN. (1958-1967)

PARAMETER		DEPTH GROUP	RAINSTORM DURATION (MIN) 120.0	180.0	240.0	300.0
A OF NONDIM. HYETOGRAPH	2MEAN>	D >= MEAN	.439	.347	.460	.407
A OF NONDIM. HYETOGRAPH		D >= 2 MEAN	.198	.377	.164	.198
A OF NONDIM. HYETOGRAPH		D >= 0.5 MEAN	.438	.389	.394	.391
A OF NONDIM. HYETOGRAPH		D >= MEAN	.331	.359	.347	.303
NONDIM. 1ST TIME MOMENT	2MEAN>	D >= MEAN	.475	.441	.493	.434
NONDIM. 1ST TIME MOMENT		D >= 2 MEAN	.377	.451	.327	.367
NONDIM. 1ST TIME MOMENT		D >= 0.5 MEAN	.474	.456	.452	.446
NONDIM. 1ST TIME MOMENT		D >= MEAN	.431	.445	.430	.401
NONDIM. 2ND TIME MOMENT	2MEAN>	D >= MEAN	.308	.264	.311	.264
NONDIM. 2ND TIME MOMENT		D >= 2 MEAN	.211	.281	.178	.183
NONDIM. 2ND TIME MOMENT		D >= 0.5 MEAN	.307	.278	.281	.268
NONDIM. 2ND TIME MOMENT		D >= MEAN	.264	.270	.260	.224
NONDIM. TIME STD.DEV.	2MEAN>	D >= MEAN	.257	.225	.235	.216
NONDIM. TIME STD.DEV.		D >= 2 MEAN	.230	.236	.225	.187
NONDIM. TIME STD.DEV.		D >= 0.5 MEAN	.253	.232	.240	.219
NONDIM. TIME STD.DEV.		D >= MEAN	.245	.229	.231	.201
NUMBER OF RAINSTORMS	2MEAN>	D >= MEAN	38	25	13	7
NUMBER OF RAINSTORMS		D >= 2 MEAN	31	16	8	7
NUMBER OF RAINSTORMS		D >= 0.5 MEAN	120	60	38	28
NUMBER OF RAINSTORMS		D >= MEAN	69	41	21	14

FEDERALLY COORDINATED PROGRAM (FCP) OF HIGHWAY RESEARCH AND DEVELOPMENT

The Offices of Research and Development (R&D) of the Federal Highway Administration (FHWA) are responsible for a broad program of staff and contract research and development and a Federal-aid program, conducted by or through the State highway transportation agencies, that includes the Highway Planning and Research (HP&R) program and the National Cooperative Highway Research Program (NCHRP) managed by the Transportation Research Board. The FCP is a carefully selected group of projects that uses research and development resources to obtain timely solutions to urgent national highway engineering problems.*

The diagonal double stripe on the cover of this report represents a highway and is color-coded to identify the FCP category that the report falls under. A red stripe is used for category 1, dark blue for category 2, light blue for category 3, brown for category 4, gray for category 5, green for categories 6 and 7, and an orange stripe identifies category 0.

FCP Category Descriptions

1. Improved Highway Design and Operation for Safety

Safety R&D addresses problems associated with the responsibilities of the FHWA under the Highway Safety Act and includes investigation of appropriate design standards, roadside hardware, signing, and physical and scientific data for the formulation of improved safety regulations.

2. Reduction of Traffic Congestion, and Improved Operational Efficiency

Traffic R&D is concerned with increasing the operational efficiency of existing highways by advancing technology, by improving designs for existing as well as new facilities, and by balancing the demand-capacity relationship through traffic management techniques such as bus and carpool preferential treatment, motorist information, and rerouting of traffic.

3. Environmental Considerations in Highway Design, Location, Construction, and Operation

Environmental R&D is directed toward identifying and evaluating highway elements that affect the quality of the human environment. The goals are reduction of adverse highway and traffic impacts, and protection and enhancement of the environment.

4. Improved Materials Utilization and Durability

Materials R&D is concerned with expanding the knowledge and technology of materials properties, using available natural materials, improving structural foundation materials, recycling highway materials, converting industrial wastes into useful highway products, developing extender or substitute materials for those in short supply, and developing more rapid and reliable testing procedures. The goals are lower highway construction costs and extended maintenance-free operation.

5. Improved Design to Reduce Costs, Extend Life Expectancy, and Insure Structural Safety

Structural R&D is concerned with furthering the latest technological advances in structural and hydraulic designs, fabrication processes, and construction techniques to provide safe, efficient highways at reasonable costs.

6. Improved Technology for Highway Construction

This category is concerned with the research, development, and implementation of highway construction technology to increase productivity, reduce energy consumption, conserve dwindling resources, and reduce costs while improving the quality and methods of construction.

7. Improved Technology for Highway Maintenance

This category addresses problems in preserving the Nation's highways and includes activities in physical maintenance, traffic services, management, and equipment. The goal is to maximize operational efficiency and safety to the traveling public while conserving resources.

0. Other New Studies

This category, not included in the seven-volume official statement of the FCP, is concerned with HP&R and NCHRP studies not specifically related to FCP projects. These studies involve R&D support of other FHWA program office research.

* The complete seven-volume official statement of the FCP is available from the National Technical Information Service, Springfield, Va. 22161. Single copies of the introductory volume are available without charge from Program Analysis (HRD-3), Offices of Research and Development, Federal Highway Administration, Washington, D.C. 20590.