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Weather Bureau

Frequency and Duration of Thunderstorms at Cape Kennedy Part II

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Space Operations Support Division

SILVER SPRING
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ESSA TECHNICAL MEMORANDA

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FREQUENCY AND DURATION OF THUNDERSTORMS AT CAPE KENNEDY, PART II (APPLICATION TO FORECASTING)

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FREQUENCY AND DURATION OF THUNDERSTORMS AT CAPE KENNEDY, PART II * (APPLICATION TO FORECASTING)

Charles J. Neumann

ABSTRACT

This study presents an objective forecast scheme for estimating the probability of thunderstorm activity at or in the immediate vicinity of the Kennedy Space Center, Florida. Three predictors form the basis of the probability determination The principal predictor is the observed 3000-foot wind direction taken daily at 1200 GMT at the Space Center Of secondary importance, but still significant, is the concurrent 3000-foot wind speed The third predictor, time, is inherent in the forecast scheme since a separate set of probabilities is presented for each of the 31 5-day periods comprising the May through September "thunderstorm season " The probabilities were found to range from near zero with northeasterly winds in May to near 90 percent with 14-knot southwesterly winds in July and August. Provision is made for stating the probabilities for the entire afternoon or over portions of the afternoon

INTRODUCTION AND REVIEW OF PART I

This study was undertaken by the Spaceflight Meteorology Group SMG), ESSA, Weather Bureau, Miami, Florida, to provide an objective echnique for estimating the probability of afternoon thunderstorm activity at or in the immediate vicinity of the Kennedy Space Center (KSC) Part I of this study (Neumann 1968), presented a statistical analysis of thunderstorm probabilities at KSC over various exposure periods ranging from an instantaneous thunderstorm occurrence to occurrences over consecutive hourly periods or days. These data are presented for each of the 73 5-day overlapping 15-day periods throughout the year Figures 1 and 2 illustrate the type of chart which can be prepared from data contained in Part I Figure 1a gives the probability of at least one thunderstorm over any time span for the first day of August. The diagram shows, for example, that starting at 1600 EST on this date and continuing for the next 6 hours, there is a 35 percent chance of observing at least one thunderstorm at or in the immediate vicinity of Cape Kennedy.

* Part I of this study was issued as WBTM SOS 2, June 1968

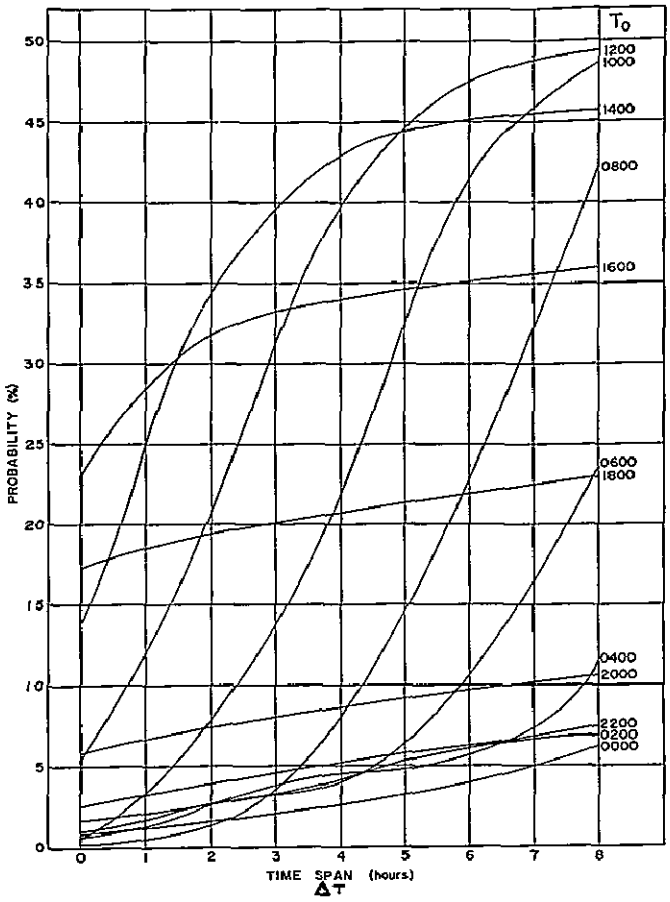

Figure 1a Probability (%) of at least one thunderstorm on August 1 (EST) between time T_o and time T_o + Δ T. (data derived from Part I)

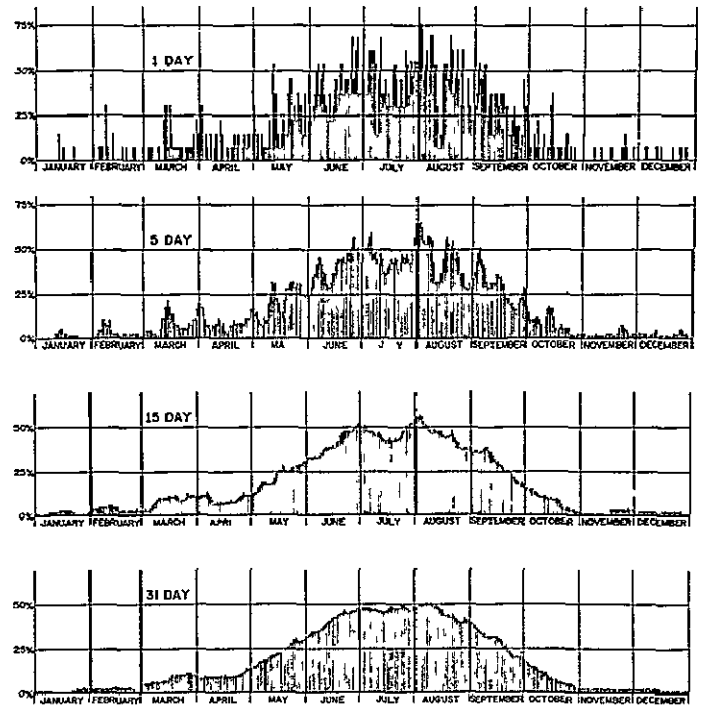

Figure 1b. Daily thunderstorm frequencies (top panel) smoothed over periods of 5, 15, and 31 days (data derived from Part I).

The decision to use a 15-day smoothing period in Part I was made after an analysis of computer generated plots of the daily "thunderstorm-day" averages smoothed over several smoothing periods The results of this smoothing are shown in figure 1b. The 1-day values given on the chart are simply the number of thunderstorm days out of 13 possible years expressed on a percentage basis The remaining panels of figure 1b show the smoothing over periods of 5, 15, and 31 days The 5-day plot still shows too much scatter, the 31-day plot seems to show excessive smoothing in that some of the real seasonal variations (notably the mid-July minimum) are filtered out The 15-day smoothing period does not show excessive scatter and is still short enough to preserve cyclical variations explainable by known atmospheric processes Accordingly, the 15-day period was chosen and was used in all data summaries contained in Part I and, where applicable, in Part II

The data presented in figure 1b pertain to thunderstorm occurrence over the entire day, that is 0000-2400 EST Most of the remaining figures and discussion in this study pertain only to "afternoon" thunderstorms The term "afternoon," as used herein, refers to the afternoon convective process and will comprise the period 1000 to 2200 EST Any day upon which a thunderstorm (T, TR, or TRW) was recorded at Cape Kennedy [1] between these hours was considered to be an afternoon thunderstorm Also, any thunderstorm which started between 2200 and 1000 EST was considered to be a nocturnal thunderstorm Thus, a thunderstorm which began in the afternoon and continued past 2200 EST was recorded as both an afternoon and a nocturnal thunderstorm Any thunderstorm which began nocturnally and continued past 1000 EST (a rare event) was also considered to be in both categories

Part I of this report includes data on thunderstorm probabilities over extended time periods Figure 1c shows data for two selected dates, 1 August and 1 May The figure shows, for example, that during the 5-day period August 1 through August 5, at least one afternoon thunderstorm can be expected 90 percent of the time and that by extending the period another 5 days, that is, through August 10, the probability approaches 100 percent On the opposite end of the spectrum, the figure shows that the probability of observing seven consecutive afternoons with thunderstorms, that is, August 1 through 7, is 10 percent and of 10 consecutive days, 5 percent

[1] The Cape Kennedy observations are taken at the Air Force Eastern Test Range weather station, which is about 1 mile inland from the easternmost point of Cape Kennedy (figure 13)

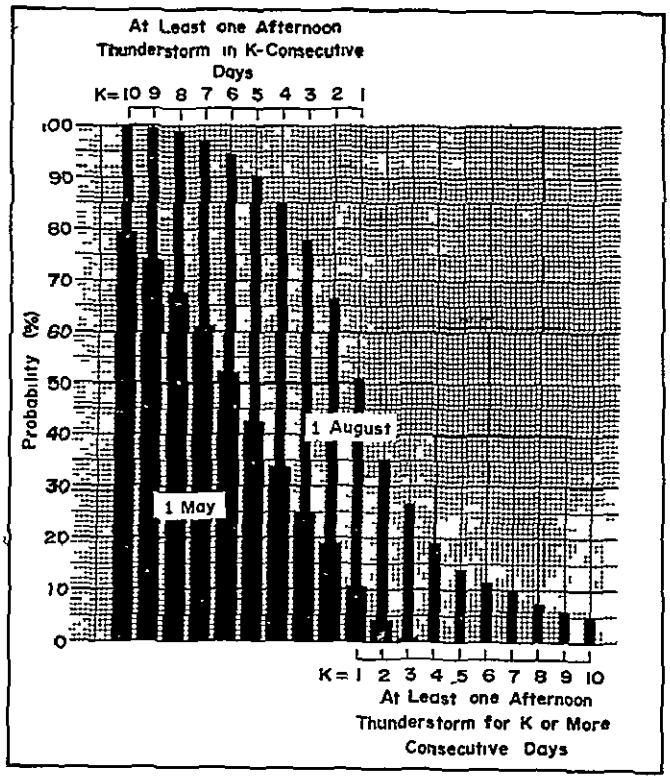

Figure 1c. Probability (%) of specified thunderstorm event starting on August 1 and on May 1 and continuing for k-consecutive days (data derived from Part I).

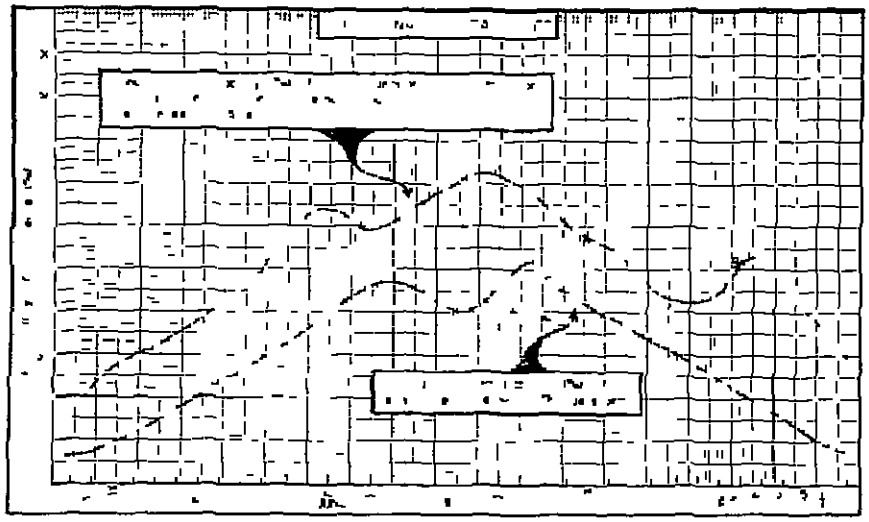

Figure 1d. Conditional thunderstorm probabilities (data derived from Part I).

Conditional probabilities are also presented in Part I. Figure 1d illustrates some of these data. The figure shows, for example, that on August 1 the probability of at least one thunderstorm is 51 percent However, given that a run of afternoon thunderstorms had commenced on the previous day, July 31, the probability increases to near 70 percent Also included in Part I are the Poisson probabilities of multiple thunderstorm occurrences on single days.

The probabilities given in Part I and as illustrated in figures 1a-1d are stated without regard to any particular weather situation and rapidly lose their utility when the forecast period decreases to 5 days or less At that time the forecaster is forced to modify the climatological expectancy based on such synoptic parameters as the latitudinal position of the subtropical ridge line This study, Part II, assists the forecaster by providing objectively determined thunderstorm probabilities based on three predictors, (1) the observed 1200 GMT 3000-foot wind direction at KSC, (2) the concurrent 3000-foot wind speed, and (3) the current date

THE ANNUAL THUNDERSTORM CYCLE AT KSC

In Part I of this study, it was shown that the annual thunderstorm cycle at the Kennedy Space Center can be subdivided into eight time periods

Period 1 - (November through early March) Thunderstorms are observed only about once per month and are confined, for the most part, to instability or convergence associated with synoptic-scale disturbances.

Period 2 - (Early March through early April) There is a marked increase in thunderstorm activity associated primarily with prefrontal squall lines

Period 3 - (Mid-April) Slight decline in thunderstorm activity due to cessation of frontal activity--still insufficient daytime heating and resultant convection

Period 4 - (Late April through June) Almost linear increase in thunderstorm activity associated with increasing solar heating and attendant instability

Period 5 - (First half of July) There is a slight decline in thunderstorm activity See period 6 for explanation

Period 6 - (Latter half of July through early August) There is a secondary increase in thunderstorm activity The reason for the mid-July slump in thunderstorm activity is probably related to the fact that the mid-tropospheric ridge line is frequently directly over central Florida in July This results in warmer mid-tropospheric temperatures with attendant stability By late July or early August, the mid-tropospheric ridge line retreats southward but the low-level ridge line continues to drift northward This latter condition is a mechanism for greater instability

Period 7 - (Early August through the first third of September). Gradual decline in afternoon thunderstorm activity with decreasing solar heating. The rate of decline is relatively slow during this period due to the fact that nocturnal and early morning thunderstorm occurrence reaches a maximum at this time

Period 8 - (Latter two-thirds of September through October) There is a rapid decline in thunderstorm activity The primary reason for this rapid decline is, of course, associated with the decrease in solar radiation Other contributing factors are the rapid decline of nocturnal storm activity and the occasional presence of a recurving tropical cyclone off the coast of Florida This latter condition results in large scale divergence over Florida and oftentimes the intrusion of cooler and drier air

Figure 2 was prepared from the 13 years of data utilized in Part I of this study and is presented here to illustrate the annual thunderstorm cycle As discussed in Part I, the thunderstorm frequencies (estimated probabilities) on figure 2 were computed for each day of the year using a 15-day moving average The value of 20 percent, for example, on September 26 for the period 0000-2400 indicates that out of the 15-day period centered on September 26 over the 13-year period of record, that is, September 19 through October 3 (a total of 15 x 13 or 195 days), thunderstorms occurred 39/195 x 100 or 20 percent of the time A further discussion of these data can be found in Part I The data on nocturnal and early morning thunderstorms (2200-1000 EST) given in figure 2 are presented for information only Such thunderstorms are a relatively rare event at KSC and no attempt will be made in this report to discuss other than afternoon thunderstorms

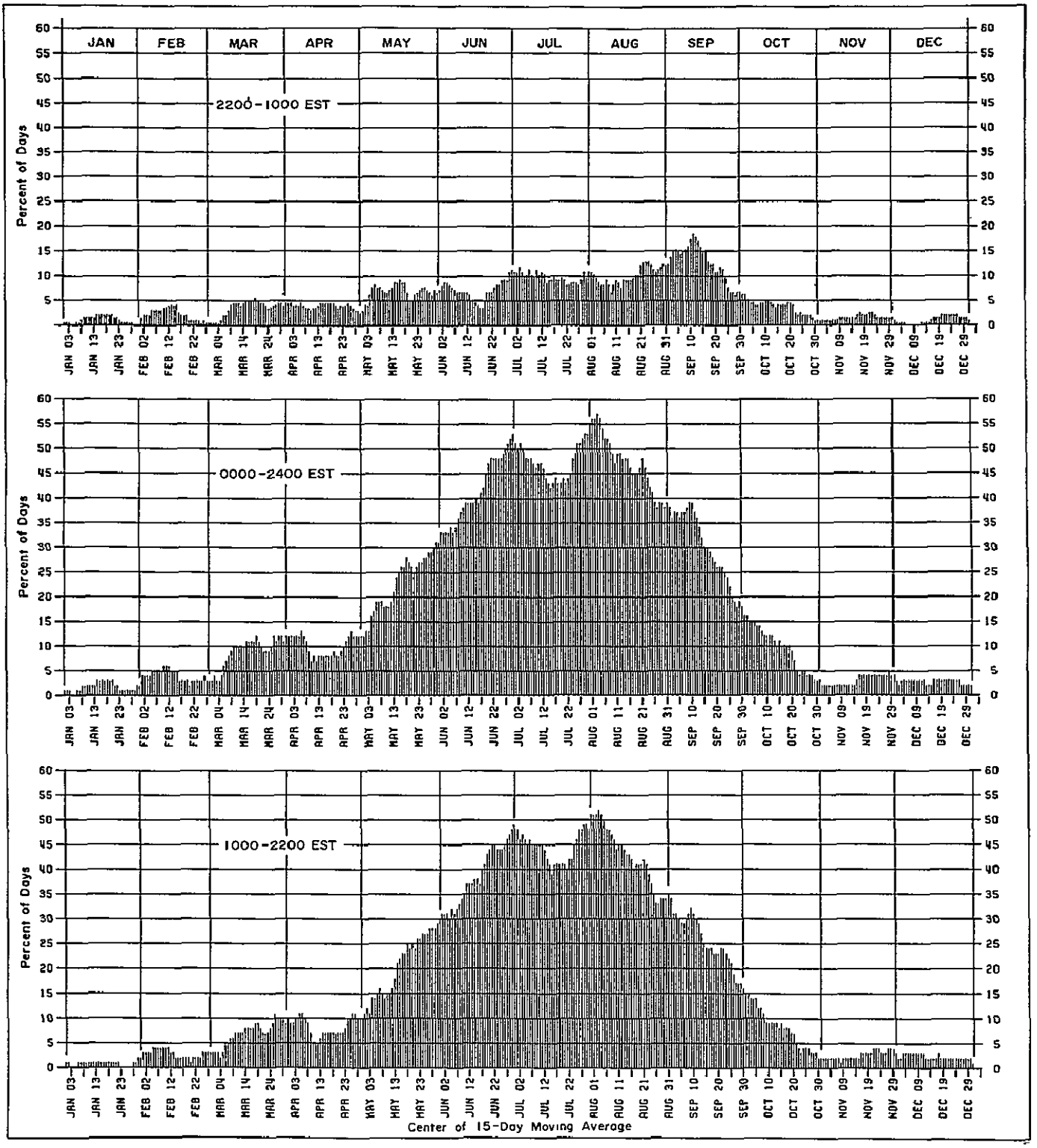

Figure 2. Probability of thunderstorms at or in the immediate vicinity of the Kennedy Space Center over specified time intervals (data derived from Part I)

CAUSES OF THUNDERSTORMS OVER THE FLORIDA PENINSULA

In Part I, it was pointed out that the unusually high thunderstorm frequency over the Florida peninsula is related to the presence of rather unique physical environmental conditions. There is virtually an inexhaustible supply of low-level moisture with attendant conditional instability Furthermore, the landmass is large enough to allow vigorous afternoon convection with further lifting action supplied by the sea-breeze convergence (Byers and Rodebush 1948) and in some cases by transitory synoptic or subsynoptic scale features.

Since KSC is located on the east coast with the main landmass to the west, both a priori and a posteriori reasoning (Frank, Moore, and Fisher 1967) lead to the conclusion that insofar as the convective process is concerned, a westerly wind component would be required to advect landmass thunderstorms across the Kennedy Space Center An easterly wind component, on the other hand, would be expected to advect landmass thunderstorms further away from KSC while light and variable winds would allow thunderstorms to build in the immediate vicinity of KSC. The Gulf Stream which leads to nocturnal convection east of the Cape is rather far offshore and apparently not a direct factor

An informal and unpublished study by the author shows that during the thunderstorm season, the best single predictor of afternoon thunderstorm activity at or in the immediate vicinity of KSC is the low-level wind direction This study was made from 5 years of data for the months July and August only (1961 through 1965) and utilized the 1800Z observed wind. The findings are not at all surprising, the low-level wind flow has, in fact, been successfully used for many years by operational forecasters as a basic subjective predictor of the temporal and spatial variations of thunderstorms over the Florida peninsula. The study showed that the 2-, 5-, and 10,000-foot winds yield about the same forecast skill scores, but the winds at higher levels yield progressively poorer results when used as single predictors It was decided to arrive at some strictly objective technique for utilizing the low-level winds as a thunderstorm predictor. The 3000-foot level was chosen as the reference level rather than 2000 feet, since many of the past records list data for this level (actually 1 kilometer) rather than for 2000 feet

The low-level winds, of course, can not be expected to explain all the statistical variance of thunderstorm activity On some occasions, apparently as a consequence of large-scale divergence as evidenced by midtropospheric dryness, summertime thunderstorms fail to materialize or

remain isolated even in a favorable low-level flow pattern. This happens most frequently during the month of July when the 500-millibar ridge line may be positioned directly over Cape Kennedy. This additional predictor was not taken into account in this study and must be handled in a subjective manner.

DATA AVAILABLE FOR ANALYSIS

Exactly the same period of record (13 years, 1951, 1952, and 1957 through 1967) was utilized in this study as in Part I. In all, 1223 separate thunderstorm occurrences (T, TR, or TRW) were recorded on 912 calendar days with a total duration of 2071.8 hours. The total of 912 includes 13 days which were considered thunderstorm days only because a thunderstorm which started on the previous day continued past midnight and no further thunder was recorded on these 13 days. This is standard observational practice.

A serially complete record of 3000-foot 1200 GMT winds for the same 13 years was prepared from records obtained from the ESSA National Weather Records Center. Missing winds were estimated by reference to original or microfilm past weather charts on file at the ESSA National Hurricane Laboratory.

CLIMATOLOGICAL CHARACTERISTICS OF THE 1200 GMT 3000-FOOT WINDS

Since the 1200 GMT 3000-foot winds (both speed and direction) will be used as the basic predictors, a general discussion of the characteristics of these winds without regard to the thunderstorm outcome would be in order. Most of the salient features of the climatological 3000-foot 1200 GMT winds can be obtained by reference to figures 3 and 4.

Figure 3 depicts both the time and space variations of the wind by means of 73 sets of ellipses The smaller ellipse contains exactly 50 percent of the 3000-foot 1200 GMT wind vectors drawn with the head of the vector at the origin while the larger of the two ellipses contains 90 percent of the vectors assuming a bivariate normal distribution of the east/west (u) and the north/south (v) components of the wind. As pointed out by Crutcher (1967), such an assumption is reasonable when dealing with upper wind statistics. The ellipses were drawn in the meteorological rather than the mathematical sense in order to enhance their operational utility. For example, most winds on August 16 blow from the southwest.

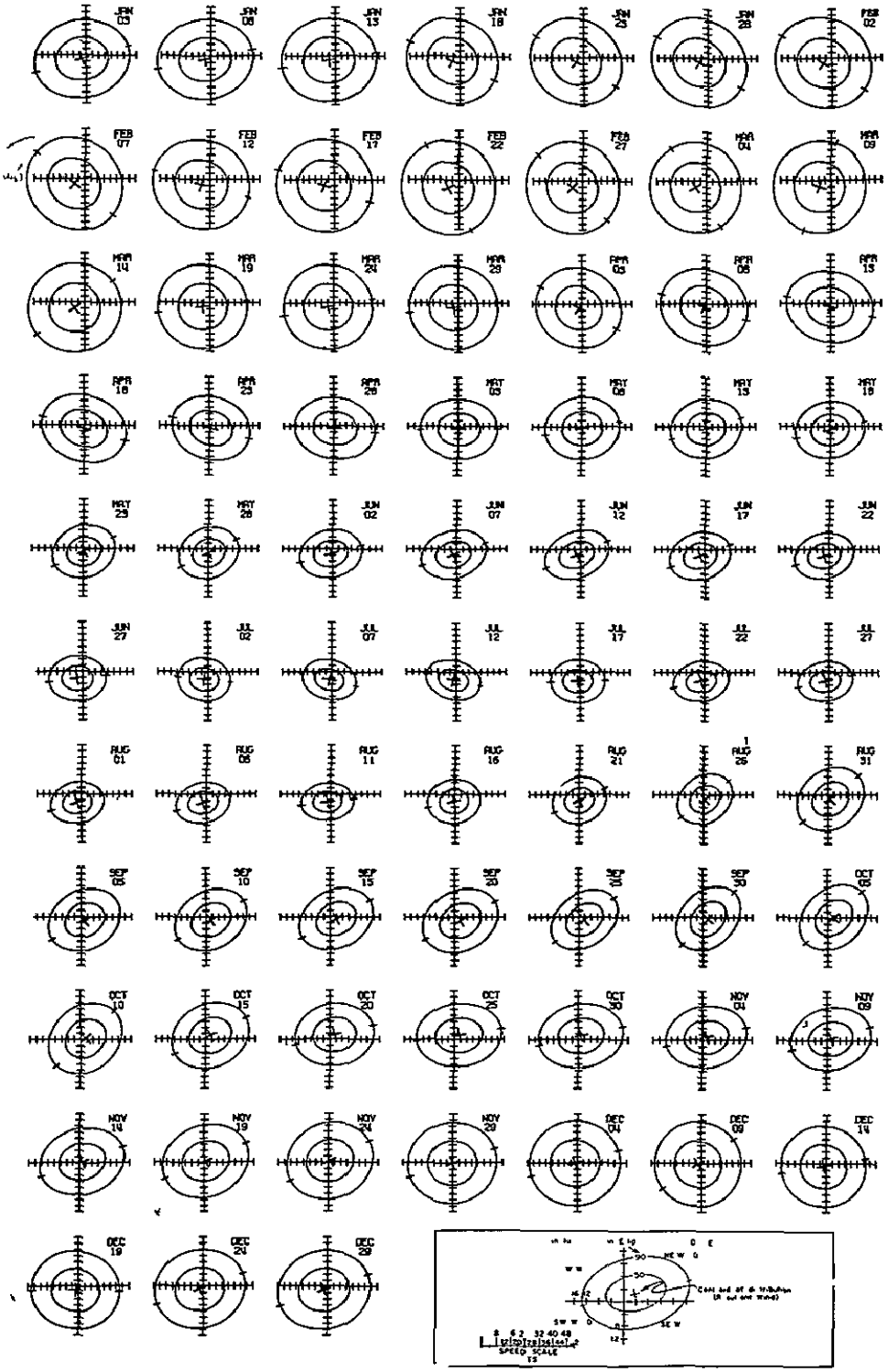

Figure 3. Distribution of the 1200 GMT 3000-foot winds at the Kennedy Space Center assuming a bivariate normal distribution of the u and the v components of the wind Each set of ellipses is computed for the 25-day period centered on the specified date The ellipses show the distribution of the wind from a particular direction

The midpoint (centroid) of the ellipse represents the resultant wind This is the location of the mean of all the $\bar{u}$ and $\bar{v}$ components which were considered in the elliptical computations The scale of figure 3 is too small to obtain any numerical details of the distribution. This was done intentionally, larger scale ellipses, one for each of the 31 five-day periods from May 3 through September 30, are contained in the appendix The purpose here is merely to give an overview of the entire distribution. Details on the mathematical derivation of these ellipses can be found in Crutcher (1967) or Hope and Neumann (1968).

Each of the sets of 73 ellipses on figure 3 are computed from 325 actual observations. The ellipses for August 6, for example, was computed from the 1200 GMT data over the 13-year period of record between July 25 and August 18 (13 years x 25 days = 325 observations). The data set for each ellipse overlaps the data set from the time adjacent ellipse. The set centered on August 11, drops the period July 25 through 29 and adds the period August 19 through 23 This 25-day moving average technique smooths out some irregularities in the data sample

In the relative sense, any given ellipse can be treated as a standard wind rose On August 6, for example, the winds are seldom from any northerly direction When they do blow from the north the speeds seldom exceed a few knots. The resultant wind on August 6 is seen to be from the southsouthwest at about 6 knots. The larger ellipses during the colder half of the year indicate the greater variability of the wind during this season

The seasonal translation of the ellipse centroid or resultant wind follows a fairly regular pattern This is illustrated in figure 4 The position of each of the 73 centroids were connected with a straight line and the interpolated position for the midpoint of each month was entered on the diagram Southwesterly winds occur bimodally both in winter and summer Southeasterly winds predominate in September giving way to northeasterly winds in October and November Note the marked change in the centroid between mid-March and mid-April, also between 15 August and 15 September, and again 15 November to 15 December

3000-FOOT WIND CHARACTERISTICS WITH AND WITHOUT THUNDERSTORMS

In the previous section, the characteristics of the 3000-foot winds were discussed but without any reference to thunderstorm activity The thunderstorm "season" at Cape Kennedy can be considered to extend from 1 May through 30 September. The resultant 1200 GMT 3000-foot wind during this period as plotted on figure 4 is 187 degrees at 3.6 knots. Figure 5 shows

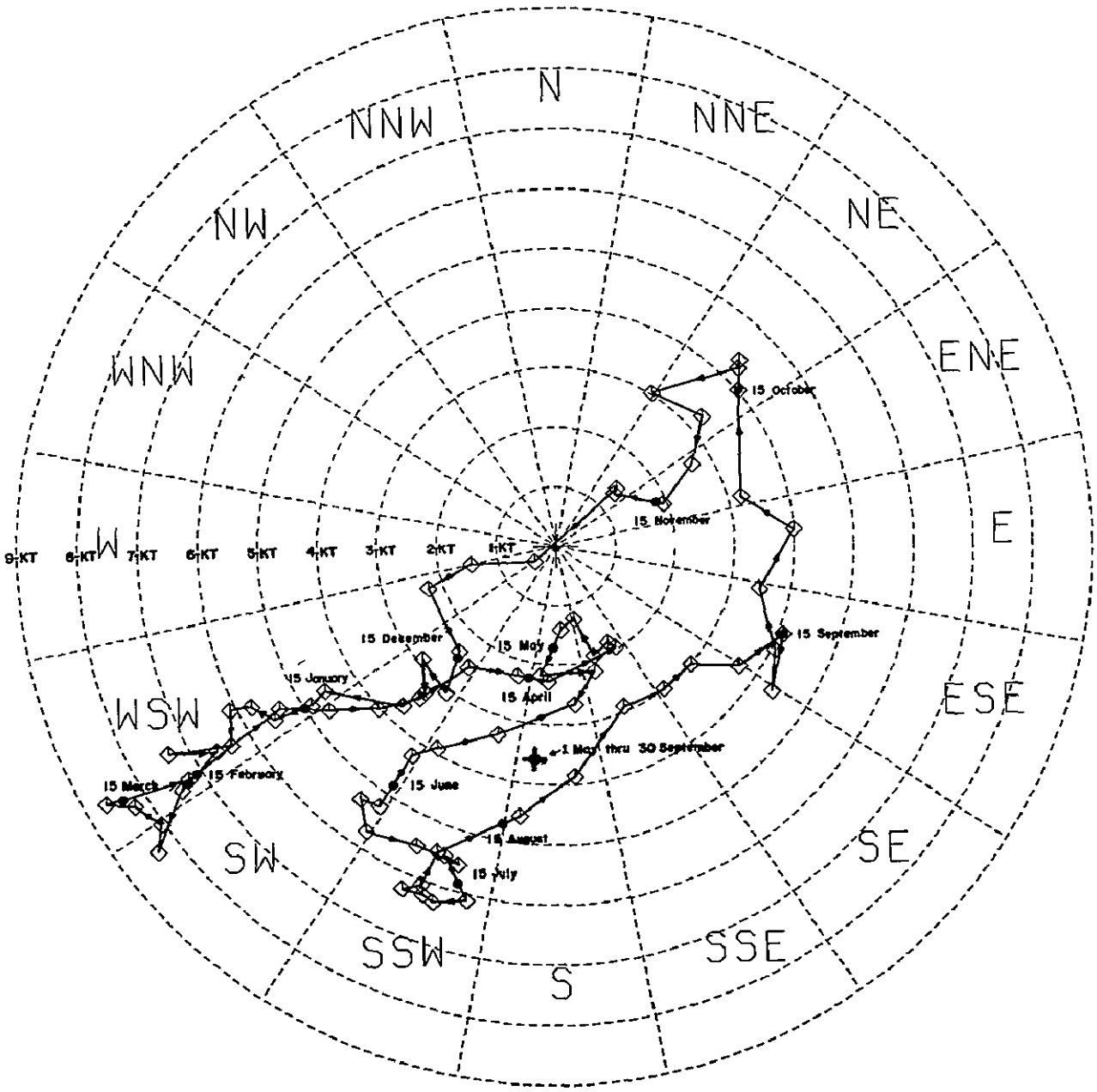

Figure 4 Location (◈) of the 1200 GMT 3000-foot resultant wind at the Kennedy Space Center for each of the 73 dates referred to in figure 3 The location (●) of the resultant wind for the 15th day of each month is interpolated from the location of the adjacent 5-day positions The location (✦) of the resultant wind for the entire thunderstorm season is 187 degrees at 3 6 knots

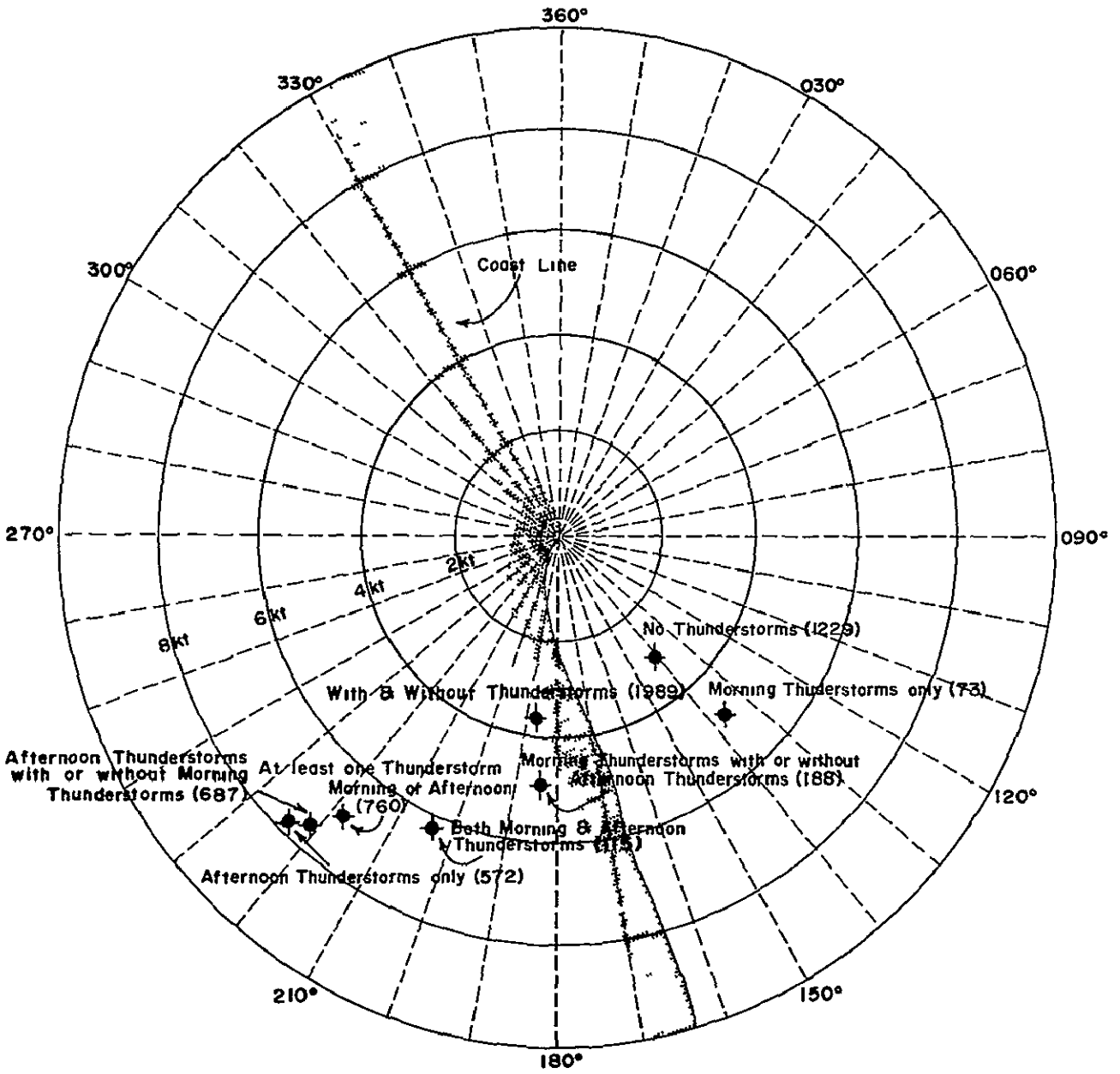

Figure 5 Resultant 1200 GMT 3000-foot winds during the May through September thunderstorm season with various combinations of thunderstorm and no-thunderstorm days Shading shows the relative orientation of the Florida eastern coast Number of cases is given in parenthesis

the location of this centroid under all possible combinations of thunderstorm conditions. With afternoon (1000-2200 EST) thunderstorms, the centroid is seen to shift well to the southwest whereas with only morning (2200-1000 EST) thunderstorms, the centroid is seen to shift almost directly east, the axis of the shift in centroids is almost normal to the coastline Note that the orientation of the coastline has been shown on figure 5 There is no scale intended here, the comparison is with direction only. Part of the shift in the location of the centroid is explainable by the intraseasonal variations in the climatological location of the centroid. That is, most thunderstorms occur in July and August, and figure 4 shows that the climatological position of the centroid shifts southwestward in July and August The shift shown on figure 5, however, far exceeds that expected from figure 4

Figure 6 gives a further insight into the relationship between wind direction and thunderstorm occurrence For the purposes of this figure, the winds were resolved into their $\underline{u}$ (east/west) and $\underline{v}$ (north/south) components The relatively high southerly components of the wind with afternoon thunderstorms during the late autumn, winter and spring reflect the synoptic scale thunderstorm situations which occur during these cooler months, when strong southerly winds precede advancing cold fronts and squall lines On the other hand, there is relatively little difference in the $\underline{u}$-component of the wind during these months on days with at least one afternoon thunderstorm, compared to other days. During the height of the convective thunderstorm season, just the reverse appears to be true That is, there is little, if any, difference in the mean vector $\underline{v}$-component but a somewhat greater difference in the $\underline{u}$-component. The bottom panel of figure 6 shows the mean scalar speed under both thunderstorm and combined thunderstorm/no-thunderstorm conditions. Aside from slightly greater speeds during the period November through April, little diagnostic information is available from considering only the mean speed

THUNDERSTORM PROBABILITIES OVER THE ENTIRE THUNDERSTORM SEASON

As already mentioned, the convective thunderstorm season at KSC will be considered to extend from May through the end of September The probability of thunderstorm occurrence under similar synoptic patterns varies considerably over the season As shown in figure 2, the afternoon thunderstorm probability increases quite linearly from 11 percent of the days in early May to a maximum of 49 percent of the days at the end of June. After a slight decline in mid-July, another peak of 51 percent of the days is reached at the beginning of August A gradual, somewhat erratic decline then occurs to a value of 16 percent by the end of the period The "average" probability during the period is 35 percent. Obviously, any

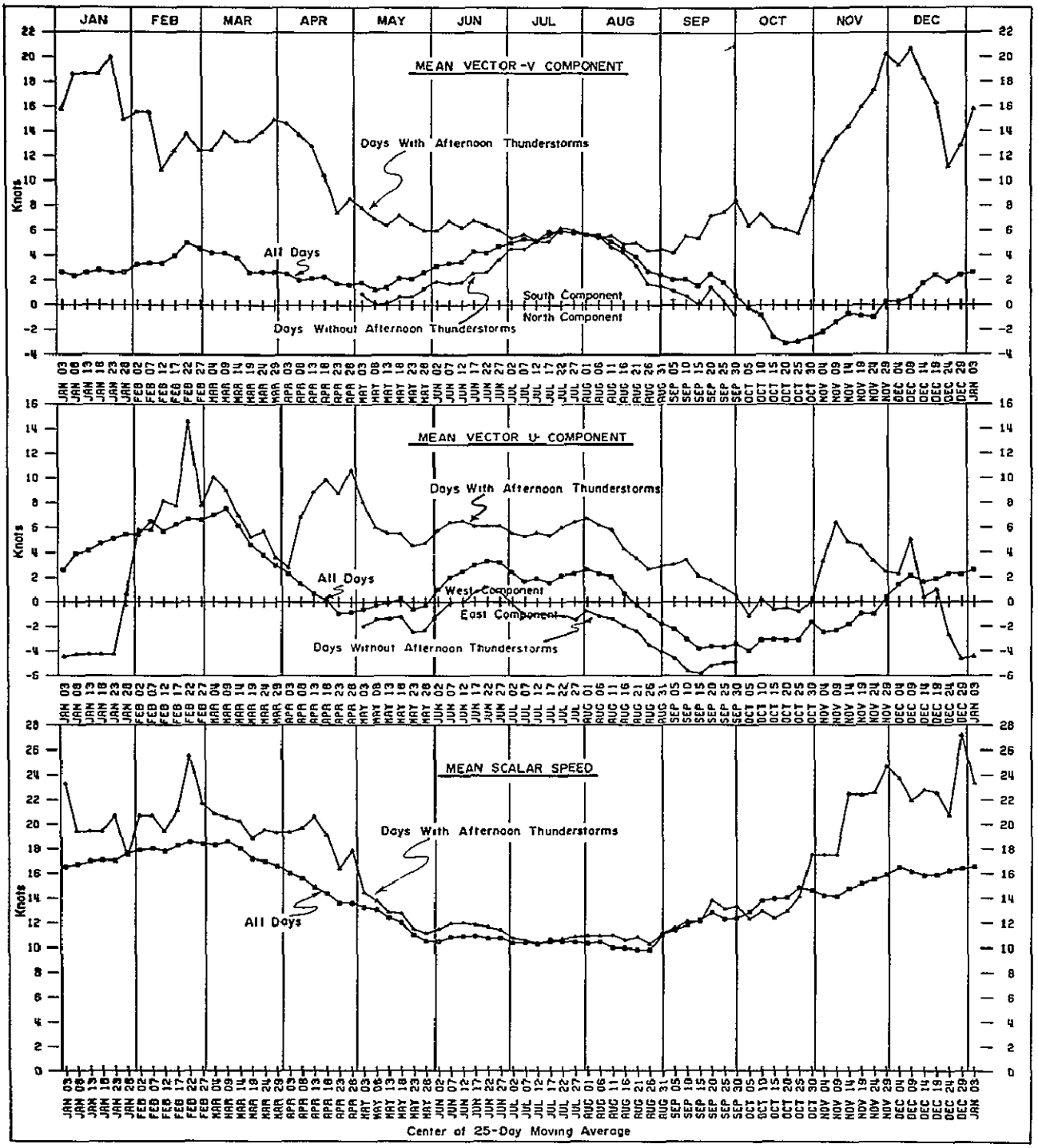

Figure 6 Annual variation in the 1200 GMT 3000-foot vector and scalar winds under conditions with and conditions with and without afternoon thunderstorms The vector locations of the wind components under conditions without afternoon thunderstorms are given for the period May through September only

forecast scheme must take into account this climatological variability. As it turns out, for example, and as will be shown later, a 3000-foot wind of 250/10 knots was followed by afternoon thunderstorms about 66 percent of the time considering the season as a whole. However, on 1 May, this same wind speed and direction combination was followed by thunderstorm occurrence 27 percent of the time, while on 1 August, the probability rises to near 90 percent.

Table 1 shows the observed frequency distribution of the 1200 GMT 3000-foot winds between 1 May and 30 September over the 13 years of record on days with at least one afternoon thunderstorm and also on all days, with or without thunderstorms Note that the speeds are given in meters per second (mps). Out of the 1989 possible days, thunderstorms occurred on 587 days. Relative thunderstorm occurrence frequencies can be obtained by dividing the frequency indicated by the bottom panel of table 1 by the total number of observations given by the top panel. The speed and direction combination 220/05 mps, for example, occurred on 12 occasions during the 13 years of record. Afternoon thunderstorms occurred on 8 of these occasions, giving a relative frequency of occurrence of 8/12 or 67 percent

Because of the relatively small number of observations of each speed and direction combination, these computed frequencies cannot be considered to be good estimates of the probability. The speed and direction combination 230/08 mps for example, occurred on 6 occasions. On each of these occasions an afternoon thunderstorm was recorded giving a relative frequency of 100 percent. Obviously, the probability of afternoon thunderstorms, although high, cannot be expected to be 100 percent Similarly, the speed and direction combination 160/06 mps occurred on 9 occasions but afternoon thunderstorms never occurred. In this case, the probability, if derived from the frequency, would unrealistically be stated as zero. These difficulties can be minimized by considering a larger block of observations centered on the given speed and direction combination according to the equation

$$\overline{F}_{ij} = 1/N \sum_{i=-10}^{+10} \sum_{j=-1}^{+1} A_{ij} \approx \overline{P}_{ij} \qquad (1)$$

where the subscript i refers to a particular direction in increments of 10°,
the subscript j refers to a given wind speed between 2 and 25 mps,
$\overline{F}$ is the frequency over the entire thunderstorm season,
$\overline{P}$ is the estimated probability over the whole season,
N is the total number of observations (top panel of table 1),
A is the number of occurrences (bottom panel of table 1).

FREQUENCY DISTRIBUTION OF 1200GMT 3000 FT WIND SPD AND DRCN ON ALL DAYS, WITH OR WITHOUT TSTMS

DIR	SPEED(KPS) 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	SUM
010		3	1	2	1	1			1																												9
020	2	3	2	3	8	1	3	4	2	3	1																										32
030	3	3	3	3	4	2	2		1	2		3						1																			27
040	2	4	3	6		4	1	1	2		2	2	1			1																					29
050	5	1	5	6	7	5	4	1	3		1	3	1								1																43
060		5	4	4	1	3	3	3	1	1	1																										26
070	1	7	7	9	7	7	9	3	4	1			3	2		1																					61
080	5	6	5	8	3	5	6	4	3	2	4	1												1													53
090	1	8	13	10	9	18	6	6	5	5	1	2				2																					86
100	4	9	6	3	11	6	7	6	4	4	1	2					1					1															65
110	6	10	11	5	10	9	9	4	2	5	1				1																					73
120	2	6	9	7	8	7	5	3	2	4		2		1																						56
130	1	4	9	3	6	9	5	5	2	3	2																										49
140	2	11	13	8	8	13	7	9	1	4	1																										77
150	3	6	15	8	10	7	9	2	6	1	1		1						1																		70
160	6	11	12	15	18	9	9	11		2	2		1																								96
170	5	4	8	7	12	8	4	3	2	2	1	1			1																						58
180	6	13	13	19	15	21	11	6	3	2	2									1																	112
190	2	9	5	10	15	9	4	5	3	2	4	1	2	1																							72
200	2	10	14	14	8	13	8	2	3	2		1	2	3			1				1						1										84
210	3	6	5	5	15	11	14	4	4	1	5	2	1			1						1					1			1							80
220	1	4	9	19	12	11	12	9	5	4	3	1	1		1			1			1																94
230	3	6	11	14	16	8	13	6	6	3	2	5		1		1	1			1																	97
240	1	7	10	7	10	15	15	6	3	6	1	3		1	1								1														87
250	6	10	10	13	15	7	6	7	6	7	4	2	1			1		1						1	1												98
260		3	3	7	12	5	6	4	3	4	2	1			3																						53
270	4	12	4	14	7	9	7	3	3			1		1	2	1	1																				69
280	3	5	4	4	3	5	7	3			1	1	1	1				1																			39
290	3	5	8	7	6	6	8	3	2	3	2	1	2				1																				57
300	1	4	5	3	2	3	6	1			1																										26
310	2	3	2	2	2	2	4		1																												18
320	1	1	6	4	3	1	3	1	2																								1				23
330		4	1	2	1		1	4																													13
340	3	4	5	5	2	1	1	4	1																												26
350	1	1		2	1	1	2																														8
360		3	3	1	1	1			2	2	1	1			1		1																				17
SUM	90		244		269		217		88		47		17		9		5		1		3		1		1		0		0		1		1		0	1983
		211		259		243		133		75		36		12		8		4		2		2		2		0		2		0		0		0		0	

TOTAL NUMBER OF OBS CALM IS 6 PERIOD INCLUDED IN SUMMARY IS FROM 01 MAY THRU 30 SEPT

FREQUENCY DISTRIBUTION OF 1200GMT 3000 FT WIND SPD AND DRCN ON DAYS WITH AT LEAST ONE AFTN-TYPE(1000-2200EST) TSTM.

DIR	SPEED(MPS) 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	SUM
010		2																																			2
020	1	1	1	1					1																												5
030	1																																				1
040				1																																	1
050			1	1	1	1																															4
060		1		1	1																																3
070						1	3																														4
080		1	1	1			2	1	1																												7
090		3	1			1	1		1																												7
100	1	1				2	1										1																				6
110	2	1	1	2		1		2		1																											10
120			2	1						2																											5
130	1		2	1					1	1																											6
140	1	3	4	1	2	4	1	2																													18
150	1	1	4	1	1	2	1		2		1																										14
160		2	1	6	4		2	5			2																										22
170	1		2		4	1	2	2	1	1		1			1																						16
180	2	3	4	9	8	9	6	3	3	2																											49
190		4	3	5	6	5	3	4	2	1	1	1	1	1																							37
200		4	9	7	6	5	6	2	3	1		1	2	2																							48
210	1	2	2	3	8	8	12	2	3		3	1	1																			1					47
220	1	3	4	14	8	11	7	3	4	2	1	1		1				1																			61
230		3	3	7	11	6	10	6	3	1	2	2		1		1	1			1																	57
240		3	8	4	6	11	11	4	1	3		1		1	1																						54
250	3	5	7	7	6	5	6	5	4	3	3	1	1											1													57
260		2	2	7	6	3	1	4	3	1	1																										30
270	2	5	1	9	6	5	3	3	2								1																				37
280		3	2	1	3	3	6	3			1		1																								23
290	2	1	1	4	5	2	4	3			1		1				1																				25
300		2	2	2			4	1																													11
310			1		2	1	1																														5
320			4	3			1																														8
330																																					0
340		1							1																												2
350				1			2																														3
360			1								1																										2
SUM	20		74		94		96		36		17		7		2		4		0		0		0		1		0		0		1		0		0	687
		57		100		87		55		19		9		6		1		1		0		0		1		0		0		0		0		0		0	

TOTAL NUMBER OF OBS CALM IS 0. PERIOD INCLUDED IN SUMMARY IS FROM 01 MAY THRU 30 SEPT.

Table 1 Frequency distribution of 1200 GMT 3000-foot wind speed and direction on all days, and on days having one or more thunderstorms (1000 - 2200 EST) May - September

Thus, a better estimate of the probability of at least one afternoon thunderstorm (over the entire season) given a 1200 GMT 3000-foot wind of 230/08 mps would be

$$P_{(230/08)} = (7+3+4+10+6+3+11+4+1)/(12+9+5+13+6+6+15+6+3)$$

$$= 49/75 = 0\ 653 = 65\%$$

Speed Only

The joint data listed in table 1 can be treated in the univariate sense The sums across the bottom of the table represent the number of occurrences of the specified speeds without regard to the direction The estimated probability of afternoon thunderstorms as a function of speed alone utilizing equation (1) in the univariate sense is given on figure 7 The estimated probability of afternoon thunderstorms over the whole season given a wind of say, 10 mps would be

$$(36+19+17)/(88+75+47) = 34\%$$

These are the values plotted on figure 7 The figure shows that only a small amount of statistical variance in thunderstorm occurrence is explainable by the speed alone The maximum at 8 mps (15 knots) is probably the optimum speed value associated with transport of a thunderstorm cell and the convective process itself Lower wind speeds, although apparently favoring the convective process, do not transport the thunderstorm cell very far. Speeds of the order of 11 mps (21 knots), although transporting the cell over a much larger distance, are probably not associated with as much convection Still higher speeds appear to produce a secondary maximum on figure 7. These are primarily associated with thunderstorms accompanying synoptic scale disturbances where additional vertical motion processes are involved. In general, however, it can be stated that, in itself, the wind speed is a poor predictor of afternoon thunderstorm occurrence

Direction Only

In table 1, the sums in the last column represent the number of specified direction occurrences without regard to the speed Again, equation (1) was used in the univariate sense to arrive at estimated probabilities. The results are shown in figure 8 The figure shows that the estimated probability of thunderstorm occurrence displays marked variation with 3000-foot wind direction The minimum value of 10 percent with northeasterly winds contrasts rather sharply with the maximum of near 60 percent with winds from the southwest The direction, therefore, insofar as single predictors are concerned, appears to be of prime importance.

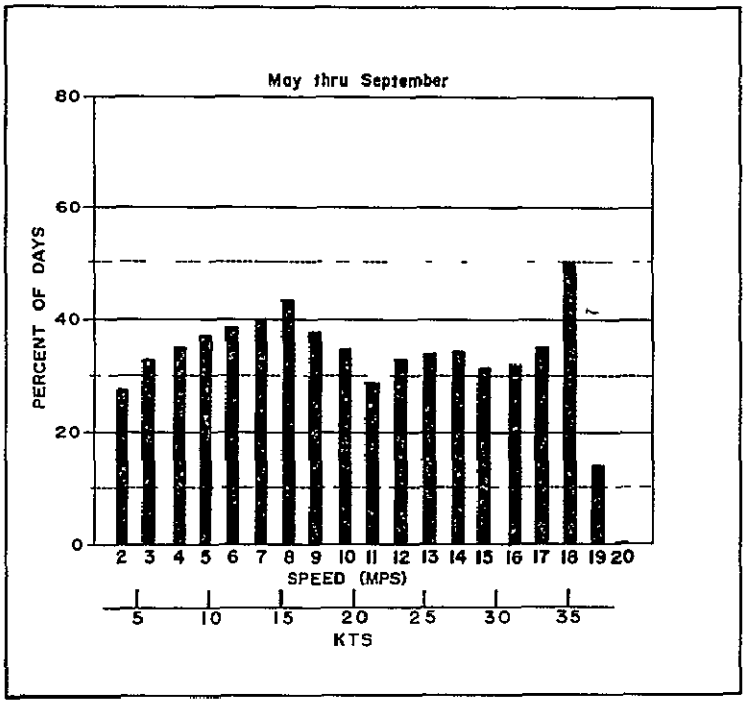

Figure 7. Probability of afternoon thunderstorms with 1200 GMT 3000-foot wind speeds between 2 and 20 meters per second

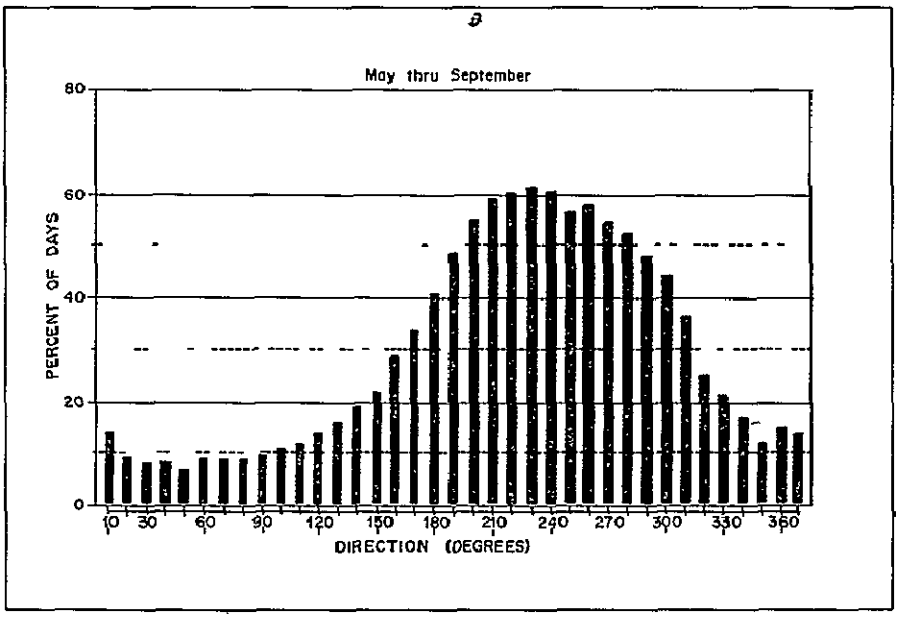

Figure 8 Probability of afternoon thunderstorms with each 1200 GMT 3000-foot wind direction in 10 degree increments

Both Speed and Direction

In the two previous paragraphs, it was shown that the 3000-foot wind direction was a much better predictor of afternoon thunderstorm occurrence than was the 3000-foot wind speed Actually, both the speed and the direction contribute to a reduction in variance. It will be shown, for example, that a southwest wind of 15 knots is more favorable than a southwest wind of 5 knots. Conversely, a northeasterly wind of 5 knots will be shown to be more favorable than a northeasterly wind of 15 knots. Obviously, this suggests some type of joint distribution. The usual procedure in problems of this type involving geophysical data is to assume that the distribution of thunderstorm days and non-thunderstorm days are both bivariate normal in the $\underline{u}$ and the $\underline{v}$ components of the wind and to effect a solution by fitting the data to the bivariate normal density function. One result of this procedure would be that thunderstorm behavior could be inferred outside the range of the wind observations. Operationally, there is little to be gained from these inferences As it turns out, there are sufficient data to obtain probability estimates of afternoon thunderstorm occurrence for wind speeds up to 25 knots. Table 1 shows that wind speeds over 13 mps (25 knots) occurred on but 54 out of the 1989 observations or 2 7 percent of the time. For this reason and since it is indeed uncertain whether we are in fact dealing with a simple bivariate normal distribution, it was decided to use the data itself to effect a solution.

Accordingly, equation (1) was applied to each combination of wind speed and direction in table 1 whenever the number of observations was 10 or over. The results were plotted onto a polar diagram and a hand analysis of the data was accomplished. Only slight subjective smoothing was applied where it seemed appropriate The analyzed field is shown in figure 9. This figure, quite strikingly, shows the bivariate character of the data, with the maximum afternoon thunderstorm expectancy centered about a wind of 225 degrees at 14 knots. The estimated probabilities are seen to decrease radially outward from this "thunderstorm centroid" in typical bivariate fashion. The gradient becomes quite marked, however, where the wind component crosses the coastline. The perimetrical numbers on figure 9 are the probabilities for direction only, extracted from figure 8 These are also the weighted average of probabilities for each direction throughout the range of wind speeds

SEASONAL SHIFT IN THE POSITION OF THE THUNDERSTORM CENTROID

The estimated probabilities defined by figure 9 apply to the thunderstorm season as a whole and cannot be applied operationally without consideration being given to the climatological variability of thunderstorm occurrence within the season itself (intraseasonal variations). As pointed

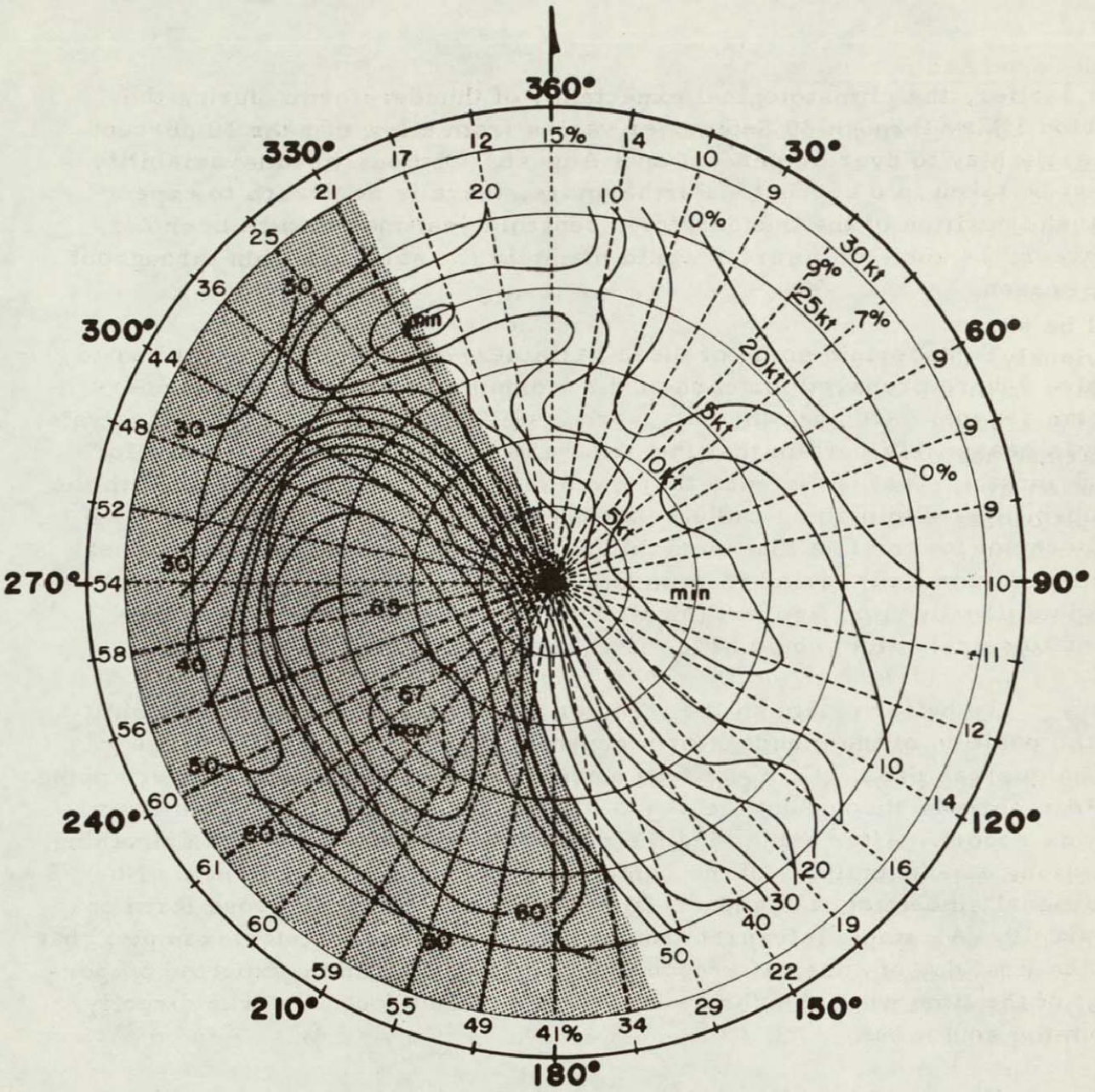

Figure 9. Probability of afternoon thunderstorms over the entire May through September thunderstorm season as a function of the 1200 GMT 3000-foot wind speed and direction. Values entered perimetrically in outer circle are the probabilities (%) for this direction without regard to the speed. This chart not to be used operationally since it applies to the season as a whole. Shading shows relative location of the Florida eastern coast.

out earlier, the climatological expectancy of thunderstorms during the period 1 May through 30 September varies from a low of near 10 percent in early May to over 50 percent on 1 August. Obviously, this variability must be taken into account. Furthermore, there is no reason to expect that the position of the thunderstorm centroid, estimated to be near 225 degrees, 14 knots on figure 9 would maintain the same position throughout the season.

To ascertain some of these variables, polar diagrams similar to figure 9 were prepared for each of the 5 months comprising the thunderstorm season. Although the data were insufficient for a conclusive analysis, it was reasonably certain that the pattern of the analysis was similar for each month. That is, in each there was one thunderstorm centroid with the probabilities diminishing radially outward in typical bivariate fashion. If it were not for the fact that the azimuthal position of the centroid (but not the radial position) varied from month to month, a simple adjustment of the isoline values on figure 9 (upward or downward, depending on the climatological value) could have effected an operational solution.

To better establish the trend of the intraseasonal azimuthal shift in the position of the thunderstorm centroid, a 15-day moving average technique was used. Computations were made for each of the 73 overlapping 15-day periods throughout the year. The technique is described in Part I of this report. After subjecting the data to a nine-point weighted smoothing function, a hand analysis of the computer output was accomplished. No additional smoothing was added. The results are shown in gross form on figure 10. A sample interpretation of the figure would be, for example, that on the first day of June, afternoon thunderstorms would be expected 50 percent of the time when the observed 1200 GMT 3000-foot wind was directly from the southwest.

Figure 10 is quite significant and the following items should be noted:

1. In general, during the period November through April, northeasterly winds never produced thunderstorms.

2. West and southwest winds preceded thunderstorms over 75 percent of the time from early July through mid-August.

3. In the early and late portions of the thunderstorm season, the maximum occurs with the 3000-foot winds from the south-southwest rather than from the west.

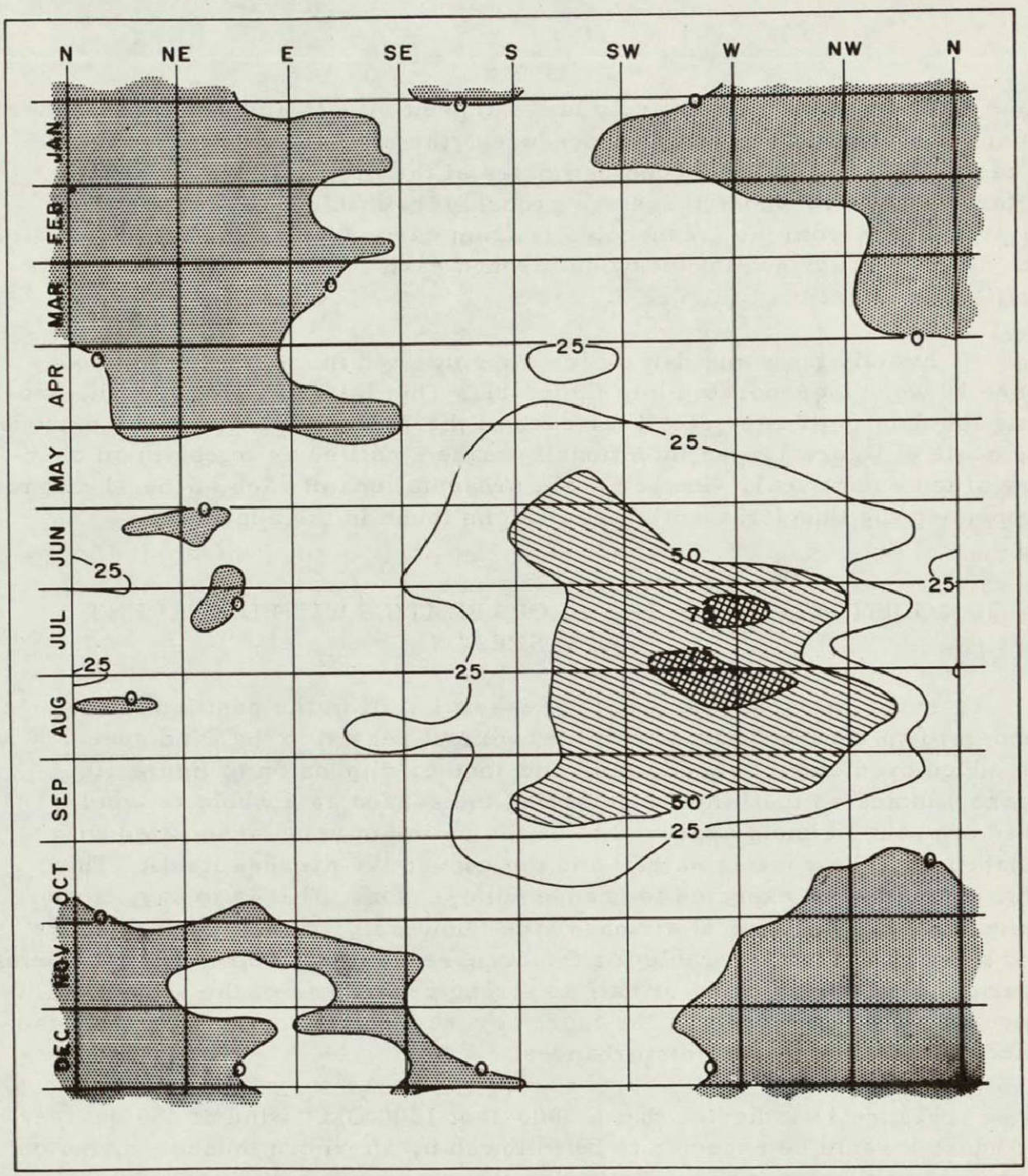

Figure 10. Probability (%) of afternoon thunderstorms on any given date as a function of the 1200 GMT 3000-foot wind direction only. The dot pattern shows areas where, after smoothing, thunderstorms did not occur during the period of record. Cross-hatching shows areas where, after smoothing, afternoon thunderstorms occurred over 75 percent of the time. The maximum value of 81 percent occurs about August 6 with a direction of 260 degrees. For operational use, a wind speed correction factor should be applied to the probabilities obtained from this figure.

Because of the relatively large amount of data and considering the moving average and smoothing procedures, the data extracted from figure 10 can be considered to be good estimates of the probabilities. The only sector of figure 10 where there are probably insufficient data to estimate the probability from the frequencies is from early June through mid-August with directions northwest clockwise through east. This condition can be verified by reference to figure 3.

Exactly the same data which were utilized in the preparation of figure 10 were incorporated into figure 11. This latter figure, though, presents the data in greater detail for each of the 73 overlapping 15-day periods. The scale of figure 11 was intentionally made small so as to obtain an overview of the entire year. Larger scale presentations of each of the 31 diagrams comprising the thunderstorm season can be found in the appendix.

MODIFICATIONS OF THE PROBABILITIES WITH DIFFERENT WIND SPEEDS

In the previous section, the seasonal shift in the position of the thunderstorm centroid was determined without regard to the wind speed. The added predictor of speed would add another dimension to figure 10. Figure 9 indicated that when considering the season as a whole, a wind speed of about 14 knots appeared to be the optimum value associated with translation of the convective cell and the convective process itself. This value should not be expected to change with season. That is to say, if we are dealing with the typical airmass type thunderstorm, a 14 knot offshore wind should be more favorable for the occurrence of afternoon thunderstorms (figure 7) than a wind twice or half as strong regardless of the season. This, of course, would not apply to the more severe thunderstorms typically associated with synoptic-scale disturbances.

Figure 11 indicates that a 3000-foot 1200 GMT wind of 250 degrees on August 1 would be expected to be followed by afternoon thunderstorms on 81 percent of the occasions. Following the reasoning in the preceding paragraph, a wind of 250/14 knots should be associated with a higher probability than 81 percent while very light or stronger winds should be associated with a lower probability. It can be noted in figure 9 that during the entire thunderstorm season, a wind of 250 degrees produced thunderstorms only 56 percent of the time but that the specific combination 250/14 mps produced thunderstorms on 66 percent of the occasions, a differential of 10 percent. Applying this same 10 percent differential to the 1 August case would therefore increase the probability to 91 percent for a wind of 250/14 mps.

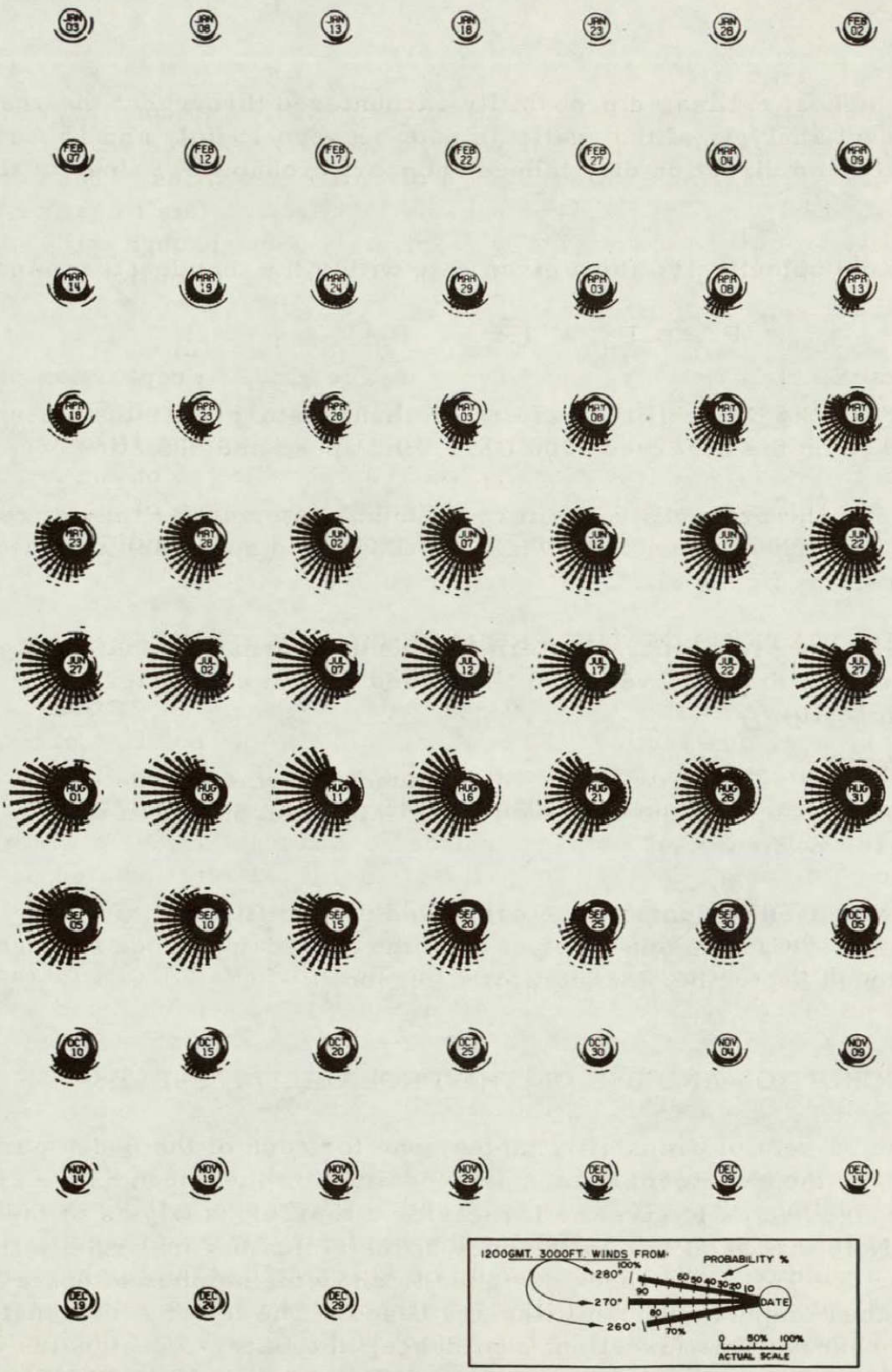

Figure 11. Probability (%) of afternoon thunderstorms on specified dates as a function of the 1200 GMT 3000-foot wind direction. For operational use a wind speed correction factor must be applied.

This is the highest estimated probability encountered throughout the year. An independent analysis of the available data between 15 July and 15 August for this speed and direction did, indeed, support probability values of this magnitude.

Stated objectively, for a given date within the thunderstorm season,

$$P_{sd} \approx P_d + (\overline{P}_{sd} - \overline{P}_d) \qquad (2)$$

where: P_{sd} is the probability of afternoon thunderstorms for that date based on the observed 1200 GMT wind speed and direction.

$\overline{P}_{sd}$ is the probability of afternoon thunderstorms for the entire season based on an observed 1200 GMT wind speed and direction (given by figure 8).

P_d is the probability of afternoon thunderstorms for that date based on the observed 1200 GMT wind direction only (given by figure 10).

$\overline{P}_d$ is the probability of afternoon thunderstorms for the entire season based on the observed 1200 GMT wind direction only (given by figure 7).

Formula 2 was used to compute the estimated probabilities of afternoon thunderstorms at Cape Kennedy for each of the 31 5-day periods throughout the May through September thunderstorm season.

DESCRIPTION AND USE OF THE PROBABILITY TABLES

The 31 sets of probability tables, one for each of the 5-day periods comprising the thunderstorm season are contained in the appendix. Each table is arranged so as to give the forecaster a thorough analysis of the situation. Note that each line in the body of the tables begins with a letter A, B, C, or D. This is an index designed to show the number of observations upon which the computed probabilities are based. The letter A designates 30 or more observations (excellent confidence); the letter B designates 20 to 29 observations (good confidence); the letter C designates 10 to 19 observations (fair confidence) and finally, the letter D (poor confidence) designates less than 10 observations.

On the bottom of each sheet are included some multiplication factors which can be used to estimate the probabilities for periods other than over the entire afternoon. Obviously, the probabilities of thunderstorms for the period 1200 to 1600 EST would have to be less than 1000-2200 EST. The climatological probabilities given in Part I were used to compute these factors. To use the factors, simply multiply the probability obtained from the tables by the appropriate value. For example, on July 17, a 3000-foot 1200 GMT wind of 250/12 knots gives a probability of one or more thunderstorms for the entire period 1000-2200 EST as 84 percent. To estimate the thunderstorm probability for the subperiod 1000-1600 EST on July 17, multiply the 84 percent by the factor 0.79 and obtain 66 percent.

Use of the multiplication factors in this way assumes, of course, that the starting times of thunderstorms on a given date are not significantly affected by different wind speed and directions. Figure 12 shows that with certain wind speed and direction combinations, this assumption does not hold. The average starting time (thunder first recorded on weather observation log) for the 687 afternoon thunderstorms over the 13 years was 1434 EST. If, for a particular speed and direction, figure 12 shows that the average starting time departs, say, more than 45 minutes from 1434, then a subjective correction to the multiplication factors is recommended. For example, on August 1, with a 1200 GMT wind of 270/15 knots, the probability of an afternoon (1000-2200 EST) thunderstorm is listed in the tables as 89 percent. Restricting the period to 1000-1300 EST gives a probability of 0.29 x 89 percent, or 26 percent. Since, according to figure 12, a wind of 270/15 knots is associated with an average starting time as 1300 EST, a probability value higher than 26 percent would be expected.

The unconditional probability of thunderstorms for any given date is given at the bottom of each table. This numerical value was taken without alteration from Part I of this report and represents the probability of at least one afternoon thunderstorm at or in the immediate vicinity of Cape Kennedy without regard to any particular wind speed or direction. Necessarily, this value would be the weighted average of all the conditional speed and directional probabilities for the given date.

Also included for each 5-day period are elliptical distributions of the expected range of observations of the 3000-foot 1200 GMT winds. These ellipses help to explain the areas of high and low confidence dependent on the number of available observations over the period of record. For example, the ellipses for August 1 show that northerly winds are infrequently observed. This gives rise to the "D" confidence associated with the assigned probability values for this date with northerly winds. Additional information on the elliptical (bivariate normal) distributions was given in the section on their climatological characteristics.

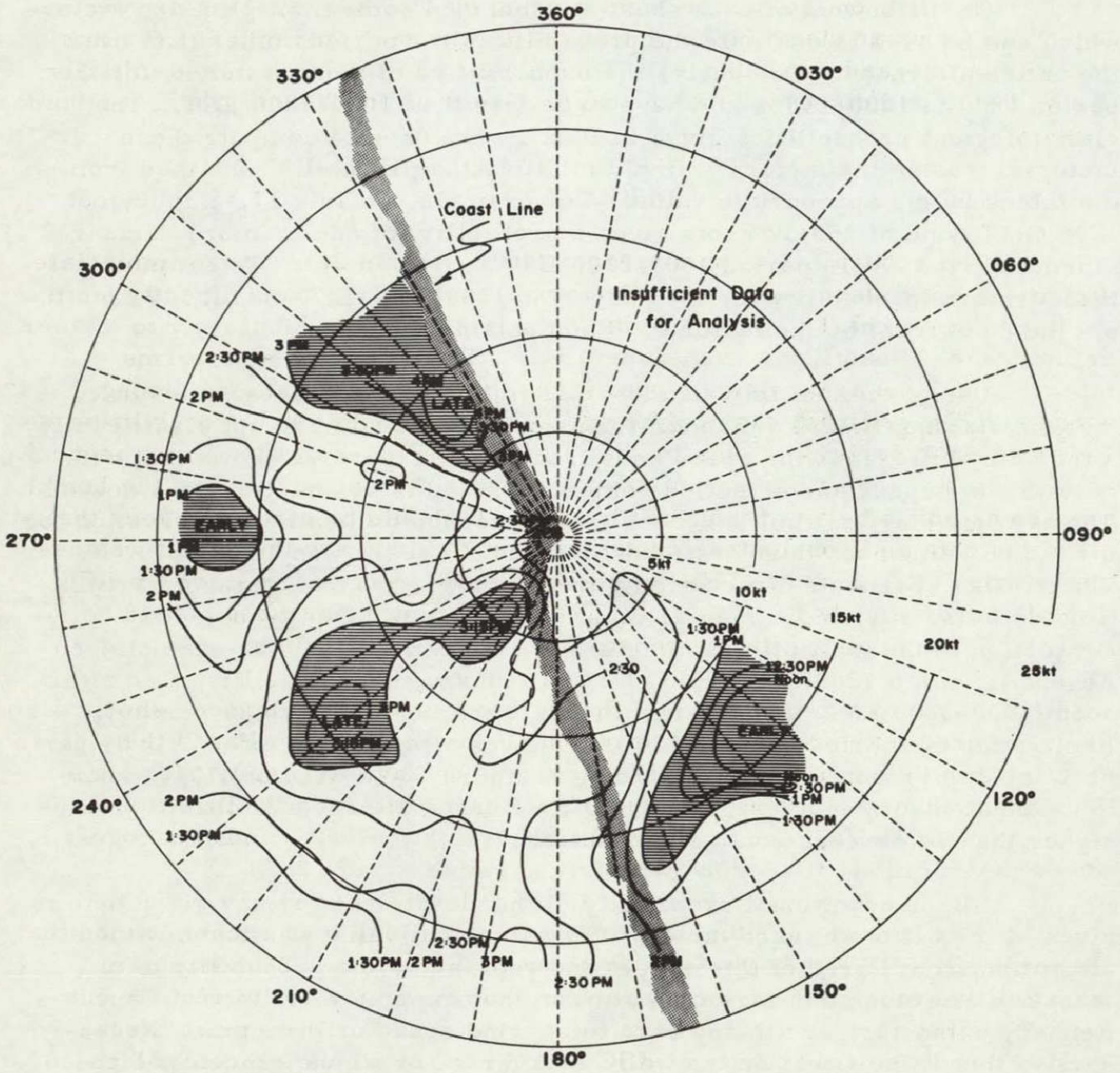

Figure 12. Average thunderstorm starting time between May and September as a function of the 1200 GMT 3000-foot wind speed and direction. Times are EST.

Finally, on the bottom right portion of each set of tables can be found sets of polar diagrams depicting the directional probabilities for this date without regard to windspeed. These diagrams were presented initially in figure 11, and discussed under seasonal shift of the thunderstorm centroid.

DISCUSSION

The probability of an afternoon thunderstorm at or in the immediate vicinity of KSC based on the specified predictors can be taken directly from the appropriate chart in the appendix. Work is currently underway to further refine these probabilities so that the areal extent of the thunderstorms (specifically, the areas of such operational hazards as lightning, strong winds and low ceilings) can also be specified with meaningful probabilities. Forecasting experience indicates that afternoon thunderstorms which occur with an easterly wind component usually remain far enough west of the launch area so as not to be an operational hazard. It should be stressed, too, that all of the data and conclusions contained herein pertain to the actual weather observation site, located about 1 mile west of the extreme eastern tip of Cape Kennedy (figure 13). However, no significant differences should be expected when applying these probabilities to the launch sites.

Day to day persistence of thunderstorms at Cape Kennedy should also be considered in the operational forecasts. It was shown in Part I that, given an afternoon thunderstorm initially occurring on say, August 1, there is a 70 percent chance of having another the following afternoon. This can also be interpreted as saying that given initially southwesterly winds on August 1, they are very likely to be southwesterly again on August 2.

For lack of any other qualifying information, it is recommended that the probabilities be used directly as given in the tables. Thunderstorm probabilities over portions of afternoons, however, are apt to require subjective corrections as discussed in the previous section. In most cases, lack of thunderstorm activity at KSC even when the winds indicate a high probability, suggests some sort of large scale divergent pattern interfering with the normal convective regime. Typically, such a condition occurs when the upper level ridge line is positioned directly over central Florida. It would be desirable to further refine the probabilities derived in this report with an additional predictor sensitive to this divergent pattern. This might well be the midlevel moisture content.

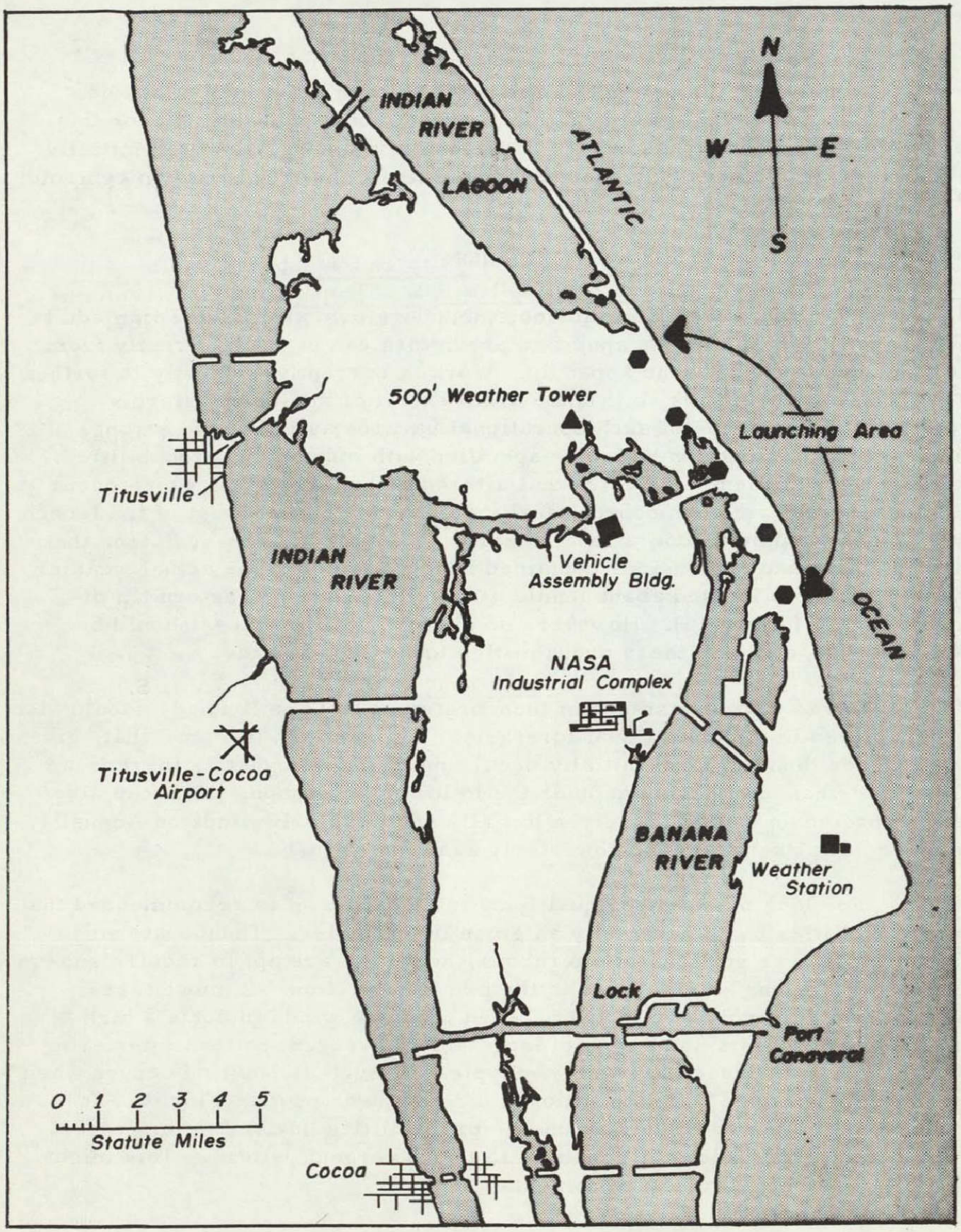

Figure 13. Map of Cape Kennedy area.

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APPENDIX

(Contains 31 sets of probability tables, one for each of the 5-day periods between May 3 and September 30)

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD) LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

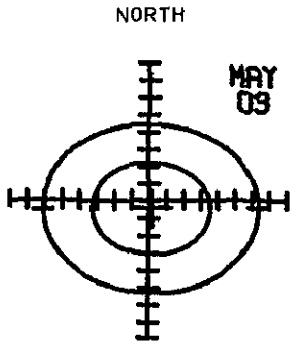
DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
C 010	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C 020	10	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C 030	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B 040	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B 050	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B 060	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B 070	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 080	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 090	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 100	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 110	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 120	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 130	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 140	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	10	10	10	**	**	**
A 150	**	**	**	**	**	**	**	**	**	**	**	**	10	11	13	15	16	17	18	19	20	21	23	25	26
A 160	10	10	10	11	11	12	14	15	15	17	17	18	20	21	21	22	23	24	25	26	27	28	29	31	32
B 170	14	15	17	18	20	21	22	24	25	27	28	29	30	30	31	33	35	37	39	41	42	42	44	45	45
B 180	14	21	22	23	26	27	28	30	31	32	34	35	37	39	40	44	47	50	52	52	51	50	46	46	47
B 190	14	22	24	29	31	31	34	35	37	38	40	42	45	47	50	50	51	51	51	51	50	50	48	46	46
B 200	11	20	24	27	30	33	36	38	40	42	44	45	46	48	49	49	48	48	48	47	46	45	44	41	42
B 210	**	10	18	21	25	27	30	33	36	38	40	41	42	42	42	42	41	40	37	34	34	33	31	33	35
B 220	**	**	15	20	22	22	29	32	34	35	36	37	40	40	39	38	35	31	27	25	26	25	25	26	32
B 230	**	**	14	18	20	23	27	29	31	33	34	35	36	36	35	34	32	28	24	23	21	20	21	21	23
B 240	**	**	11	16	18	21	24	25	27	29	29	30	31	31	31	30	29	26	23	20	18	14	13	13	14
B 250	**	**	13	17	19	20	24	26	27	29	30	31	31	31	31	31	31	30	27	24	20	17	13	13	12
A 260	**	**	11	15	17	20	22	24	25	27	28	30	30	30	30	30	30	29	27	24	19	15	10	**	**
A 270	**	**	14	18	21	23	25	27	29	30	31	32	33	33	33	33	32	31	30	29	26	14	10	**	**
A 280	**	**	10	15	18	22	22	24	26	29	30	31	31	31	30	30	30	29	26	24	17	11	**	**	**
A 290	**	**	**	14	17	18	19	22	25	26	26	29	30	31	29	27	27	27	25	20	12	**	**	**	**
B 300	**	**	**	**	**	13	14	15	15	19	20	24	24	24	24	23	23	24	21	22	12	**	**	**	**
B 310	**	**	**	**	**	**	11	**	**	16	17	17	18	16	14	14	11	**	10	10	**	**	**	**	**
B 320	**	**	**	**	11	11	12	**	13	12	11	11	11	10	10	**	**	**	**	**	**	**	**	**	**
C 330	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C 340	10	12	12	13	11	11	10	**	10	14	**	**	**	**	**	**	**	**	**	**	**	**	**	10	11
C 350	15	15	17	17	15	14	13	**	**	**	**	**	**	**	11	**	12	10	**	**	**	**	11	13	13
C 360	10	11	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**

PROBABILITY WITH 3000 FT WINDS CALM IS ** PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.14	1000-1500FST	.50
1000-1200EST	.14	1000-1600EST	.59
1000-1300EST	27	1000-1700EST	.64
1000-1400EST	.45	1000-1800EST	.82

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON MAY 03. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 11 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.



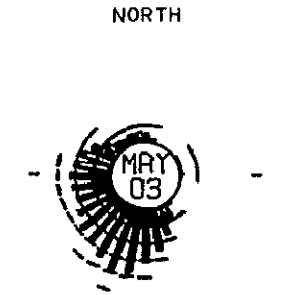


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
C 010	**	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C 020	11	11	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C 030	11	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B 040	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B 050	13	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B 060	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 070	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 080	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 090	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 100	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 110	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 120	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A 130	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B 140	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	10	11	13	14	14	14	13	13
B 150	11	11	11	11	10	11	12	12	13	13	13	14	15	16	18	20	21	22	23	24	25	26	28	30	31
B 160	17	17	17	18	18	19	21	22	22	24	24	25	27	28	28	29	30	31	32	33	34	35	36	38	39
B 170	20	21	23	24	26	27	28	30	31	33	34	35	36	36	37	39	41	43	45	47	48	48	50	51	51
B 180	17	24	25	26	29	30	31	33	34	35	37	38	40	42	43	47	50	53	55	55	54	53	49	49	50
B 190	16	24	26	31	33	33	36	37	39	40	42	44	47	49	52	52	53	53	53	53	52	52	50	48	48
B 200	15	24	28	31	34	37	40	42	44	46	48	49	50	52	53	53	52	52	52	51	50	49	48	45	46
B 210	11	18	26	29	33	35	38	41	44	46	48	49	50	50	50	50	49	48	45	42	42	41	39	41	43
B 220	10	17	25	30	32	32	39	42	44	45	46	47	50	50	49	48	45	41	37	35	36	35	35	36	42
A 230	**	14	23	27	29	32	36	38	40	42	43	44	45	45	44	43	41	37	33	32	30	29	30	30	32
A 240	**	10	19	24	26	29	32	33	35	37	37	38	39	39	39	38	37	34	31	28	26	22	21	21	22
A 250	**	**	18	22	24	25	29	31	32	34	35	36	36	36	36	36	36	35	32	29	25	22	18	18	17
A 260	**	**	12	16	18	21	23	25	26	28	29	31	31	31	31	31	31	30	28	25	20	16	11	**	**
A 270	**	**	13	17	20	22	24	26	28	29	30	31	32	32	32	32	31	30	29	28	25	13	**	**	**
B 280	**	**	**	14	17	21	21	23	25	28	29	30	30	30	29	29	29	28	25	23	16	10	**	**	**
B 290	**	**	**	13	16	17	18	21	24	25	25	28	29	30	28	26	26	26	24	19	11	**	**	**	**
B 300	**	**	**	**	13	14	15	15	19	20	24	24	24	24	23	23	24	21	22	12	**	**	**	**	**
B 310	**	**	**	**	**	11	**	**	16	17	17	18	16	14	14	11	**	10	10	**	**	**	**	**	**
B 320	**	**	**	**	10	10	11	**	12	11	10	10	10	**	**	**	**	**	**	**	**	**	**	**	**
C 330	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C 340	**	11	11	12	10	10	**	**	**	13	**	**	**	**	**	**	**	**	**	**	**	**	**	**	10
C 350	15	15	17	17	15	14	13	**	**	**	**	**	**	**	11	**	12	10	**	**	**	**	11	13	13
C 360	10	11	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**

PROBABILITY WITH 3000 FT WINDS CALM IS **, PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.13	1000-1500EST	.50
1000-1200EST	.20	1000-1600EST	.53
1000-1300EST	.27	1000-1700EST	.70
1000-1400EST	.40	1000-1800EST	.87

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON MAY 08. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 15 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

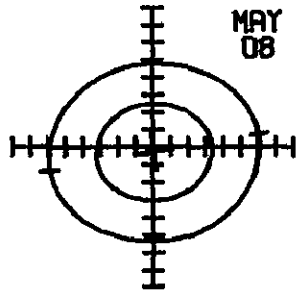


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRFCTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE **DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT)																									
C	010	13	14	14	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	020	15	15	15	14	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	030	13	13	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	040	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	050	15	14	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	060	14	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	070	14	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	080	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	090	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	100	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	110	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	120	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	130	14	13	12	12	11	10	10	10	10	10	10	10	11	11	12	13	14	14	15	16	16	16	15	12	11
B	140	15	15	15	15	14	13	14	14	14	14	14	14	13	14	15	16	18	19	20	22	23	23	23	22	22
A	150	18	18	18	18	17	18	19	19	20	20	20	21	22	23	25	27	28	29	30	31	32	33	35	37	38
B	160	21	21	21	22	22	23	25	26	26	28	28	29	31	32	32	33	34	35	36	37	38	39	40	42	43
B	170	23	24	26	27	29	30	31	33	34	36	37	38	39	39	40	42	44	46	48	50	51	51	53	54	54
B	180	19	26	27	28	31	32	33	35	36	37	39	40	42	44	45	49	52	55	57	57	56	55	51	51	52
B	190	16	24	26	31	33	33	36	37	39	40	42	44	47	49	52	52	53	53	53	53	52	52	50	48	48
A	200	17	26	30	33	36	39	42	44	46	48	50	51	52	54	55	55	54	54	54	53	52	51	50	47	48
B	210	17	24	32	35	39	41	44	47	50	52	54	55	56	56	56	56	55	54	51	48	48	47	45	47	49
A	220	17	24	32	37	39	39	46	49	51	52	53	54	57	57	56	55	52	48	44	42	43	42	42	43	49
A	230	13	21	30	34	36	39	43	45	47	49	50	51	52	52	51	50	48	44	40	39	37	36	37	37	39
A	240	11	18	27	32	34	37	40	41	43	45	45	46	47	47	47	46	45	42	39	36	34	30	29	29	30
A	250	**	15	26	30	32	33	37	39	40	42	43	44	44	44	44	44	44	43	40	37	33	30	26	26	25
A	260	**	**	17	21	23	26	28	30	31	33	34	36	36	36	36	36	36	35	33	30	25	21	16	14	12
A	270	**	**	16	20	23	25	27	29	31	32	33	34	35	35	35	35	34	33	32	31	28	16	12	10	**
B	280	**	**	12	17	20	24	24	26	28	31	32	33	33	33	32	32	32	31	28	26	19	13	**	**	**
B	290	**	**	10	16	19	20	21	24	27	28	28	31	32	33	31	29	29	29	27	22	14	**	**	**	**
B	300	**	**	**	12	16	17	18	18	22	23	27	27	27	27	26	26	27	24	25	15	**	**	**	**	**
B	310	**	**	**	**	10	12	**	10	17	18	18	19	17	15	15	12	10	11	11	**	**	**	**	**	**
C	320	**	**	**	**	10	10	11	**	12	11	10	10	10	**	**	**	**	**	**	**	**	**	**	**	**
C	330	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	340	10	12	12	13	11	11	10	**	10	14	**	**	**	**	**	**	**	**	**	**	**	**	**	10	11
C	350	17	17	19	19	17	16	15	11	11	10	**	**	**	11	13	10	14	12	11	**	**	11	13	15	15
C	360	13	14	15	14	13	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	10	10	10

PROBABILITY WITH 3000 FT WINDS CALM IS 11 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.06	1000-1500EST	.42
1000-1200EST	.14	1000-1600EST	.44
1000-1300EST	.19	1000-1700EST	.61
1000-1400EST	.31	1000-1800EST	.75

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON MAY 13. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 18 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

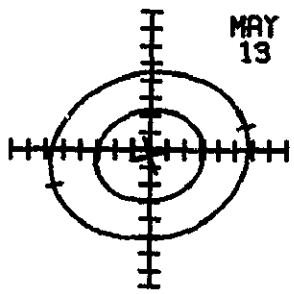


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
C	010	18	19	19	18	16	15	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	10	**	**
C	020	19	19	19	18	17	16	14	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	030	15	15	14	13	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	040	14	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	050	16	15	12	10	**	**	**	**	**	**	**	10	**	**	**	**	**	**	**	**	**	**	**	**	**
B	060	14	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	070	14	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	080	14	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	090	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	100	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	110	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	120	14	13	12	11	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	10	10	**	**	**	**
A	130	18	17	16	16	15	14	14	14	14	14	14	14	15	15	16	17	18	18	19	20	20	20	19	16	15
A	140	18	18	18	18	17	16	17	17	17	17	17	17	16	17	18	19	21	22	23	25	26	26	26	25	25
A	150	21	21	21	21	20	21	22	22	23	23	23	24	25	26	28	30	31	32	33	34	35	36	38	40	41
A	160	22	22	22	23	23	24	26	27	27	29	29	30	32	33	33	34	35	36	37	38	39	40	41	43	44
A	170	24	25	27	28	30	31	32	34	35	37	38	39	40	40	41	43	45	47	49	51	52	52	54	55	55
A	180	21	28	29	30	33	34	35	37	38	39	41	42	44	46	47	51	54	57	59	59	58	57	53	53	54
A	190	18	26	28	33	35	35	38	39	41	42	44	46	49	51	54	54	55	55	55	55	54	54	52	50	50
A	200	18	27	31	34	37	40	43	45	47	49	51	52	53	55	56	56	55	55	55	54	53	52	51	48	49
A	210	19	26	34	37	41	43	46	49	52	54	56	57	58	58	58	58	57	56	53	50	50	49	47	49	51
A	220	19	26	34	39	41	41	48	51	53	54	55	56	59	59	58	57	54	50	46	44	45	44	44	45	51
A	230	16	24	33	37	39	42	46	48	50	52	53	54	55	55	54	53	51	47	43	42	40	39	40	40	42
A	240	16	23	32	37	39	42	45	46	48	50	50	51	52	52	52	51	50	47	44	41	39	35	34	34	35
A	250	15	21	32	36	38	39	43	45	46	48	49	50	50	50	50	50	50	49	46	43	39	36	32	32	31
A	260	**	13	24	28	30	33	35	37	38	40	41	43	43	43	43	43	43	42	40	37	32	28	23	21	19
B	270	**	14	23	27	30	32	34	36	38	39	40	41	42	42	42	42	41	40	39	38	35	23	19	17	14
B	280	**	13	19	24	27	31	31	33	35	38	39	40	40	40	39	39	39	38	35	33	26	20	14	10	**
C	290	**	12	17	23	26	27	28	31	34	35	35	38	39	40	38	36	36	36	34	29	21	14	**	**	**
C	300	**	10	14	18	22	23	24	24	28	29	33	33	33	33	32	32	33	30	31	21	10	**	**	10	13
C	310	**	**	11	14	16	18	15	16	23	24	24	25	23	21	21	18	16	17	17	**	**	**	**	**	11
C	320	**	**	**	11	13	13	14	**	15	14	13	13	13	12	12	**	**	10	**	**	**	**	**	**	**
C	330	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	340	11	13	13	14	12	12	11	10	11	15	10	**	**	**	**	**	**	**	**	**	**	**	**	11	12
C	350	21	21	23	23	21	20	19	15	15	14	13	13	13	15	17	14	18	16	15	13	13	15	17	19	19
C	360	18	19	20	19	18	17	13	12	11	**	**	**	**	**	10	11	14	14	13	12	12	14	15	15	15

PROBABILITY WITH 3000 FT WINDS CALM IS 14 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.04	1000-1500EST	.41
1000-1200EST	.14	1000-1600EST	.51
1000-1300EST	.14	1000-1700EST	.67
1000-1400EST	.24	1000-1800EST	.78

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON MAY 18. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 25 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

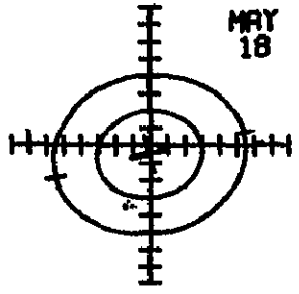


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
C	010	20	21	21	20	18	17	15	13	12	11	**	**	**	**	10	10	11	10	10	10	10	11	12	11	10
C	020	20	20	20	19	18	17	15	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	030	16	16	15	14	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	040	14	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	050	14	13	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	060	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	070	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	080	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	090	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	100	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	110	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	120	14	13	12	11	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	10	10	**	**	**
A	130	17	16	15	15	14	13	13	13	13	13	13	13	14	14	15	16	17	17	18	19	19	19	18	15	14
A	140	18	18	18	18	17	16	17	17	17	17	17	17	16	17	18	19	21	22	23	25	26	26	26	25	25
A	150	21	21	21	21	21	20	21	22	22	23	23	23	24	25	26	28	30	31	32	33	34	35	36	38	40	41
A	160	22	22	22	23	23	24	26	27	27	29	29	30	32	33	33	34	35	36	37	38	39	40	41	43	44
A	170	25	26	28	29	31	32	33	35	36	38	39	40	41	41	42	44	46	48	50	52	53	53	55	56	56
A	180	25	32	33	34	37	38	39	41	42	43	45	46	48	50	51	55	58	61	63	63	62	61	57	57	58
A	190	23	31	33	38	40	40	43	44	46	47	49	51	54	56	59	59	60	60	60	60	59	59	57	55	55
A	200	21	30	34	37	40	43	46	48	50	52	54	55	56	58	59	59	58	58	58	57	56	55	54	51	52
A	210	20	27	35	38	42	44	47	50	53	55	57	58	59	59	59	59	58	57	54	51	51	50	48	50	52
A	220	19	26	34	39	41	41	48	51	53	54	55	56	59	59	58	57	54	50	46	44	45	44	44	45	51
A	230	16	24	33	37	39	42	46	48	50	52	53	54	55	55	54	53	51	47	43	42	40	39	40	40	42
A	240	16	23	32	37	39	42	45	46	48	50	50	51	52	52	52	51	50	47	44	41	39	35	34	34	35
A	250	17	23	34	38	40	41	45	47	48	50	51	52	52	52	52	52	52	51	48	45	41	38	34	34	33
B	260	11	17	28	32	34	37	39	41	42	44	45	47	47	47	47	47	47	47	46	44	41	36	32	27	25	23
B	270	13	21	30	34	37	39	41	43	45	46	47	48	49	49	49	49	48	47	46	45	42	30	26	24	21
B	280	13	21	27	32	35	39	39	41	43	46	47	48	48	48	47	47	47	46	43	41	34	28	22	18	14
B	290	12	18	23	29	32	33	34	37	40	41	41	44	45	46	44	42	42	42	40	35	27	20	14	13	12
C	300	**	14	18	22	26	27	28	28	32	33	37	37	37	37	36	36	37	34	35	25	14	**	**	14	17
C	310	10	13	16	19	21	23	20	21	28	29	29	30	28	26	26	23	21	22	22	10	**	**	**	11	16
C	320	12	14	15	17	19	19	20	15	21	20	19	19	19	18	18	15	14	16	**	**	**	**	**	**	14
C	330	**	**	**	10	10	10	10	10	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	10
C	340	12	14	14	15	13	13	12	11	12	16	11	**	**	**	10	**	10	**	**	**	**	**	**	12	13
D	350	24	24	26	26	24	23	22	18	18	17	16	16	16	18	20	17	21	19	18	16	16	18	20	22	22
C	360	22	23	24	23	22	21	17	16	15	13	12	12	12	13	14	15	18	18	17	16	16	18	19	19	19

PROBABILITY WITH 3000 FT WINDS CALM IS 16 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.06	1000-1500EST	.39
1000-1200FST	.12	1000-1600EST	.57
1000-1300EST	.14	1000-1700EST	.67
1000-1400EST	.25	1000-1800EST	.73

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON MAY 23. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 26 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

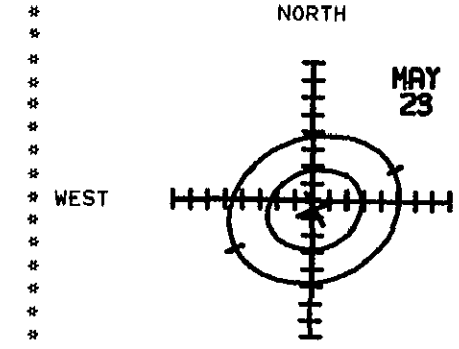


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
D	010	17	18	18	17	15	14	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	020	17	17	17	16	15	14	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	030	14	14	13	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	040	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	050	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	060	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	070	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	080	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	090	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	100	13	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	110	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	120	13	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	130	16	15	14	14	13	12	12	12	12	12	12	12	13	13	14	15	16	16	17	18	18	18	17	14	13
A	140	17	17	17	17	16	15	16	16	16	16	16	16	15	16	17	18	20	21	22	24	25	25	25	24	24
A	150	21	21	21	21	20	21	22	22	23	23	23	24	25	26	28	30	31	32	33	34	35	36	38	40	41
A	160	23	23	23	24	24	25	27	28	28	30	30	31	33	34	34	35	36	37	38	39	40	41	42	44	45
A	170	27	28	30	31	33	34	35	37	38	40	41	42	43	43	44	46	48	50	52	54	55	55	57	58	58
A	180	29	36	37	38	41	42	43	45	46	47	49	50	52	54	55	59	62	65	67	67	66	65	61	61	62
A	190	28	36	38	43	45	45	48	49	51	52	54	56	59	61	64	64	65	65	65	65	64	64	62	60	60
A	200	26	35	39	42	45	48	51	53	55	57	59	60	61	63	64	64	63	63	63	62	61	60	59	56	57
A	210	23	30	38	41	45	47	50	53	56	58	60	61	62	62	62	62	61	60	57	54	54	53	51	53	55
A	220	20	27	35	40	42	42	49	52	54	55	56	57	60	60	59	58	55	51	47	45	46	45	45	46	52
A	230	17	25	34	38	40	43	47	49	51	53	54	55	56	56	55	54	52	48	44	43	41	40	41	41	43
B	240	16	23	32	37	39	42	45	46	48	50	50	51	52	52	52	51	50	47	44	41	39	35	34	34	35
A	250	18	24	35	39	41	42	46	48	49	51	52	53	53	53	53	53	53	52	49	46	42	39	35	35	34
B	260	16	22	33	37	39	42	44	46	47	49	50	52	52	52	52	52	52	51	49	46	41	37	32	30	28
B	270	20	28	37	41	44	46	48	50	52	53	54	55	56	56	56	56	55	54	53	52	49	37	33	31	28
B	280	20	28	34	39	42	46	46	48	50	53	54	55	55	55	54	54	54	53	50	48	41	35	29	25	21
B	290	18	24	29	35	38	39	40	43	46	47	47	50	51	52	50	48	48	48	46	41	33	26	20	19	18
C	300	15	20	24	28	32	33	34	34	38	39	43	43	43	43	42	42	43	40	41	31	20	14	10	20	23
B	310	17	20	23	26	28	30	27	28	35	36	36	37	35	33	33	30	28	29	29	17	13	12	11	18	23
C	320	21	23	24	26	28	28	29	24	30	29	28	28	28	27	27	24	23	25	17	11	14	15	15	18	23
D	330	13	15	15	16	16	16	16	16	16	16	15	14	14	14	14	**	13	10	**	**	**	**	**	12	16
D	340	14	16	16	17	15	15	14	13	14	18	13	10	10	10	12	**	12	**	**	**	**	**	10	14	15
D	350	24	24	26	26	24	23	22	18	18	17	16	16	16	18	20	17	21	19	18	16	16	18	20	22	22
D	360	20	21	22	21	20	19	15	14	13	11	10	10	10	11	12	13	16	16	15	14	14	16	17	17	17

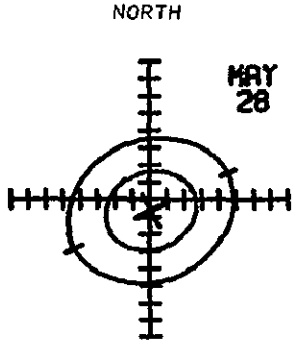
(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)

PROBABILITY WITH 3000 FT WINDS CALM IS 18 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.07	1000-1500EST	.50
1000-1200EST	.13	1000-1600EST	.67
1000-1300EST	.15	1000-1700EST	.76
1000-1400EST	.39	1000-1800EST	.80

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON MAY 28. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 28 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.



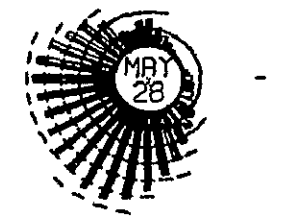


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	11	12	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	020	12	12	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	030	11	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	040	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	050	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	060	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	070	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	080	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	090	15	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	100	15	14	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	110	14	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	120	14	13	12	11	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	10	10	**	**	**	**
B	130	16	15	14	14	13	12	12	12	12	12	12	12	13	13	14	15	16	16	17	18	18	18	17	14	13
A	140	18	18	18	18	17	16	17	17	17	17	17	17	16	17	18	19	21	22	23	25	26	26	26	25	25
A	150	23	23	23	23	22	23	24	24	25	25	25	26	27	28	30	32	33	34	35	36	37	38	40	42	43
A	160	25	25	25	26	26	27	29	30	30	32	32	33	35	36	36	37	38	39	40	41	42	43	44	46	47
A	170	29	30	32	33	35	36	37	39	40	42	43	44	45	45	46	48	50	52	54	56	57	57	59	60	60
A	180	32	39	40	41	44	45	46	48	49	50	52	53	55	57	58	62	65	68	70	70	69	68	64	64	65
A	190	33	41	43	48	50	50	53	54	56	57	59	61	64	66	69	69	70	70	70	70	69	69	67	65	65
A	200	31	40	44	47	50	53	56	58	60	62	64	65	66	68	69	69	68	68	68	67	66	65	64	61	62
A	210	27	34	42	45	49	51	54	57	60	62	64	65	66	66	66	66	65	64	61	58	58	57	55	57	59
A	220	24	31	39	44	46	46	53	56	58	59	60	61	64	64	63	62	59	55	51	49	50	49	49	50	56
A	230	19	27	36	40	42	45	49	51	53	55	56	57	58	58	57	56	54	50	46	45	43	42	43	43	45
A	240	17	24	33	38	40	43	46	47	49	51	51	52	53	53	53	52	51	48	45	42	40	36	35	35	36
A	250	19	25	36	40	42	43	47	49	50	52	53	54	54	54	54	54	54	53	50	47	43	40	36	36	35
B	260	18	24	35	39	41	44	46	48	49	51	52	54	54	54	54	54	54	53	51	48	43	39	34	32	30
B	270	23	31	40	44	47	49	51	53	55	56	57	58	59	59	59	59	58	57	56	55	52	40	36	34	31
B	280	24	32	38	43	46	50	50	52	54	57	58	59	59	59	58	58	58	57	54	52	45	39	33	29	25
B	290	23	29	34	40	43	44	45	48	51	52	52	55	56	57	55	53	53	53	51	46	38	31	25	24	23
B	300	22	27	31	35	39	40	41	41	45	46	50	50	50	50	49	49	50	47	48	38	27	21	17	27	30
B	310	27	30	33	36	38	40	37	38	45	46	46	47	45	43	43	40	38	39	39	27	23	22	21	28	33
C	320	32	34	35	37	39	39	40	35	41	40	39	39	39	38	38	35	34	36	28	22	25	26	26	29	34
D	330	26	28	28	29	29	29	29	29	29	29	28	27	27	27	27	21	26	23	18	12	14	19	21	25	29
D	340	23	25	25	26	24	24	23	22	23	27	22	19	19	19	21	17	21	17	16	13	13	17	19	23	24
D	350	26	26	28	28	26	25	24	20	20	19	18	18	18	20	22	19	23	21	20	18	18	20	22	24	24
D	360	17	18	19	18	17	16	12	11	10	**	**	**	**	**	**	10	13	13	12	11	11	13	14	14	14

PROBABILITY WITH 3000 FT WINDS CALM IS 20 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.12	1000-1500EST	.53
1000-1200EST	.18	1000-1600EST	.67
1000-1300EST	.25	1000-1700EST	.77
1000-1400EST	.48	1000-1800EST	.85

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUN 02 UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 31 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

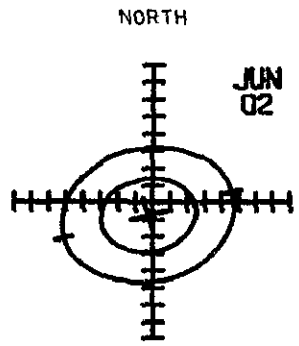


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	**	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	020	10	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	030	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	040	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	050	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	060	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	070	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	080	16	14	11	**	**	**	**	**	**	**	**	**	**	**	10	**	**	**	**	**	**	**	**	**	**
A	090	18	16	14	12	10	**	**	**	**	**	**	**	10	11	12	12	12	11	10	**	**	**	**	**	**
A	100	17	16	13	12	10	**	**	**	**	**	**	**	**	**	**	10	11	11	10	**	**	**	**	**	**
A	110	16	15	13	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	10	10	10	**	**	**
B	120	15	14	13	12	11	11	**	**	**	**	**	**	**	**	**	**	**	10	10	11	11	10	**	**	**
B	130	17	16	15	15	14	13	13	13	13	13	13	14	14	15	16	17	17	18	19	19	19	18	15	14	
B	140	18	18	18	18	17	16	17	17	17	17	17	17	16	17	18	19	21	22	23	25	26	26	26	25	25
B	150	24	24	24	24	23	24	25	25	26	26	26	27	28	29	31	33	34	35	36	37	38	39	41	43	44
A	160	27	27	27	28	28	29	31	32	32	34	34	35	37	38	38	39	40	41	42	43	44	45	46	48	49
A	170	30	31	33	34	36	37	38	40	41	43	44	45	46	46	47	49	51	53	55	57	58	58	60	61	61
A	180	34	41	42	43	46	47	48	50	51	52	54	55	57	59	60	64	67	70	72	72	71	70	66	66	67
A	190	36	44	46	51	53	53	56	57	59	60	62	64	67	69	72	72	73	73	73	73	72	72	70	68	68
A	200	34	43	47	50	53	56	59	61	63	65	67	68	69	71	72	72	71	71	71	70	69	68	67	64	65
A	210	30	37	45	48	52	54	57	60	63	65	67	68	69	69	69	69	68	67	64	61	61	60	58	60	62
A	220	27	34	42	47	49	49	56	59	61	62	63	64	67	67	66	65	62	58	54	52	53	52	52	53	59
A	230	21	29	38	42	44	47	51	53	55	57	58	59	60	60	59	58	56	52	48	47	45	44	45	45	47
A	240	18	25	34	39	41	44	47	48	50	52	52	53	54	54	54	53	52	49	46	43	41	37	36	36	37
A	250	18	24	35	39	41	42	46	48	49	51	52	53	53	53	53	53	53	52	49	46	42	39	35	35	34
A	260	16	22	33	37	39	42	44	46	47	49	50	52	52	52	52	52	52	51	49	46	41	37	32	30	28
A	270	21	29	38	42	45	47	49	51	53	54	55	56	57	57	57	57	56	55	54	53	50	38	34	32	29
A	280	22	30	36	41	44	48	48	50	52	55	56	57	57	57	56	56	56	55	52	50	43	37	31	27	23
B	290	23	29	34	40	43	44	45	48	51	52	52	55	56	57	55	53	53	53	51	46	38	31	25	24	23
B	300	25	30	34	38	42	43	44	44	48	49	53	53	53	53	52	52	53	50	51	41	30	24	20	30	33
B	310	32	35	38	41	43	45	42	43	50	51	51	52	50	48	48	45	43	44	44	32	28	27	26	33	38
C	320	39	41	42	44	46	46	47	42	48	47	46	46	46	45	45	42	41	43	35	29	32	33	33	36	41
D	330	34	36	36	37	37	37	37	37	37	37	36	35	35	35	35	29	34	31	26	20	22	27	29	33	37
D	340	30	32	32	33	31	31	30	29	30	34	29	26	26	26	28	24	28	24	23	20	20	24	26	30	31
D	350	29	29	31	31	29	28	27	23	23	22	21	21	21	23	25	22	26	24	23	21	21	23	25	27	27
D	360	16	17	18	17	16	15	11	10	**	**	**	**	**	**	**	**	12	12	11	10	10	12	13	13	13

PROBABILITY WITH 3000 FT WINDS CALM IS 22 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.10	1000-1500EST	.63
1000-1200EST	.21	1000-1600EST	.77
1000-1300EST	.32	1000-1700EST	.85
1000-1400EST	.55	1000-1800EST	.94

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUN 07. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 32 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

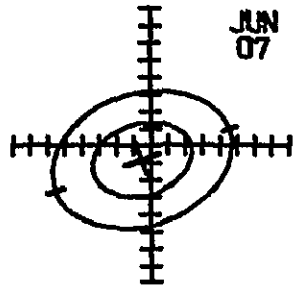


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

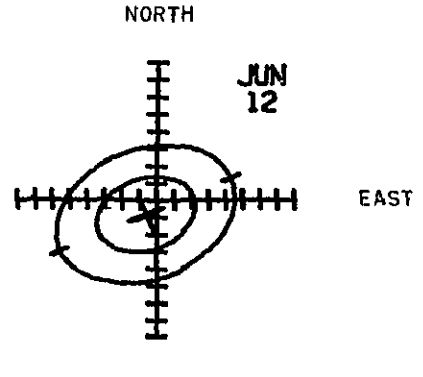
	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
D	010	14	15	15	14	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	020	13	13	13	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	030	12	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	040	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	050	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	060	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	070	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	080	17	15	12	10	**	**	**	**	**	**	**	**	10	10	11	10	**	**	**	**	**	**	**	**	**
B	090	18	16	14	12	10	**	**	**	**	**	**	**	10	11	12	12	12	11	10	**	**	**	**	**	**
B	100	18	17	14	13	11	10	**	**	**	**	**	**	**	10	10	11	12	12	11	10	10	10	**	**	**
B	110	17	16	14	13	12	11	**	**	**	**	**	**	**	**	**	**	**	**	10	11	11	11	10	**	**
B	120	16	15	14	13	12	12	10	10	**	**	**	**	**	**	10	10	10	11	11	12	12	11	10	10	**
B	130	17	16	15	15	14	13	13	13	13	13	13	13	14	14	15	16	17	17	18	19	19	19	18	15	14
B	140	18	18	18	18	17	16	17	17	17	17	17	17	16	17	18	19	21	22	23	25	26	26	26	25	25
B	150	25	25	25	25	24	25	26	26	27	27	27	28	29	30	32	34	35	36	37	38	39	40	42	44	45
B	160	28	28	28	29	29	30	32	33	33	35	35	36	38	39	39	40	41	42	43	44	45	46	47	49	50
A	170	30	31	33	34	36	37	38	40	41	43	44	45	46	46	47	49	51	53	55	57	58	58	60	61	61
A	180	33	40	41	42	45	46	47	49	50	51	53	54	56	58	59	63	66	69	71	71	70	69	65	65	66
A	190	36	44	46	51	53	53	56	57	59	60	62	64	67	69	72	72	73	73	73	73	72	72	70	68	68
A	200	35	44	48	51	54	57	60	62	64	66	68	69	70	72	73	73	72	72	72	71	70	69	68	65	66
A	210	31	38	46	49	53	55	58	61	64	66	68	69	70	70	70	70	69	68	65	62	62	61	59	61	63
A	220	29	36	44	49	51	51	58	61	63	64	65	66	69	69	68	67	64	60	56	54	55	54	54	55	61
A	230	24	32	41	45	47	50	54	56	58	60	61	62	63	63	62	61	59	55	51	50	48	47	48	48	50
A	240	21	28	37	42	44	47	50	51	53	55	55	56	57	57	57	56	55	52	49	46	44	40	39	39	40
A	250	20	26	37	41	43	44	48	50	51	53	54	55	55	55	55	55	55	54	51	48	44	41	37	37	36
A	260	17	23	34	38	40	43	45	47	48	50	51	53	53	53	53	53	53	52	50	47	42	38	33	31	29
A	270	20	28	37	41	44	46	48	50	52	53	54	55	56	56	56	56	55	54	53	52	49	37	33	31	28
A	280	20	28	34	39	42	46	46	48	50	53	54	55	55	55	54	54	54	53	50	48	41	35	29	25	21
A	290	21	27	32	38	41	42	43	46	49	50	50	53	54	55	53	51	51	51	49	44	36	29	23	22	21
B	300	23	28	32	36	40	41	42	42	46	47	51	51	51	51	50	50	51	48	49	39	28	22	18	28	31
C	310	30	33	36	39	41	43	40	41	48	49	49	50	48	46	46	43	41	42	42	30	26	25	24	31	36
C	320	37	39	40	42	44	44	45	40	46	45	44	44	44	43	43	40	39	41	33	27	30	31	31	34	39
D	330	33	35	35	36	36	36	36	36	36	36	35	34	34	34	34	28	33	30	25	19	21	26	28	32	36
D	340	31	33	33	34	32	32	31	30	31	35	30	27	27	27	29	25	29	25	24	21	21	25	27	31	32
D	350	31	31	33	33	31	30	29	25	25	24	23	23	23	25	27	24	28	26	25	23	23	25	27	29	29
D	360	21	22	23	22	21	20	16	15	14	12	11	11	11	12	13	14	17	17	16	15	15	17	18	18	18

PROBABILITY WITH 3000 FT WINDS CALM IS 22 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.07	1000-1500EST	.67
1000-1200FST	.19	1000-1600EST	.82
1000-1300EST	.32	1000-1700EST	.90
1000-1400EST	.56	1000-1800EST	.96

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUN 12. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 37 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.



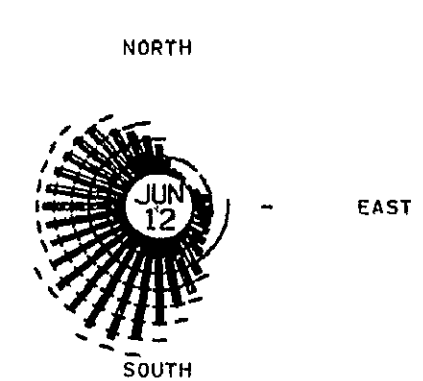


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

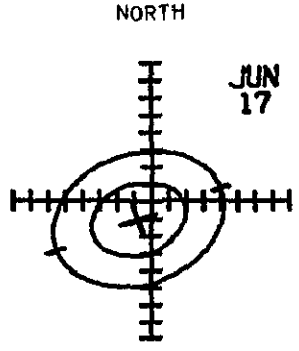
	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	26	27	27	26	24	23	21	19	18	17	14	15	15	15	16	16	17	16	16	16	16	17	18	17	16
D	020	22	22	22	21	20	19	17	15	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	030	17	17	16	15	14	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	040	14	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	050	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	060	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	070	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	080	14	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	090	14	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	100	15	14	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	110	16	15	13	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	10	10	10	**	**	**
C	120	17	16	15	14	13	13	11	11	10	10	10	10	10	10	11	11	11	12	12	13	13	12	11	11	10
C	130	20	19	18	18	17	16	16	16	16	16	16	16	17	17	18	19	20	20	21	22	22	22	21	18	17
B	140	24	24	24	24	23	22	23	23	23	23	23	23	22	23	24	25	27	28	29	31	32	32	32	31	31
B	150	31	31	31	31	30	31	32	32	33	33	33	34	35	36	38	40	41	42	43	44	45	46	48	50	51
B	160	31	31	31	32	32	33	35	36	36	38	38	39	41	42	42	43	44	45	46	47	48	49	50	52	53
A	170	31	32	34	35	37	38	39	41	42	44	45	46	47	47	48	50	52	54	56	58	59	59	61	62	62
A	180	32	39	40	41	44	45	46	48	49	50	52	53	55	57	58	62	65	68	70	70	69	68	64	64	65
A	190	33	41	43	48	50	50	53	54	56	57	59	61	64	66	69	69	70	70	70	70	69	69	67	65	65
A	200	33	42	46	49	52	55	58	60	62	64	66	67	68	70	71	71	70	70	70	69	68	67	66	63	64
A	210	32	39	47	50	54	56	59	62	65	67	69	70	71	71	71	71	70	69	66	63	63	62	60	62	64
A	220	31	38	46	51	53	53	60	63	65	66	67	68	71	71	70	69	66	62	58	56	57	56	56	57	63
A	230	27	35	44	48	50	53	57	59	61	63	64	65	66	66	65	64	62	58	54	53	51	50	51	51	53
A	240	25	32	41	46	48	51	54	55	57	59	59	60	61	61	61	60	59	56	53	50	48	44	43	43	44
A	250	24	30	41	45	47	48	52	54	55	57	58	59	59	59	59	59	59	58	55	52	48	45	41	41	40
A	260	20	26	37	41	43	46	48	50	51	53	54	56	56	56	56	56	56	55	53	50	45	41	36	34	32
A	270	22	30	39	43	46	48	50	52	54	55	56	57	58	58	58	58	57	56	55	54	51	39	35	33	30
A	280	21	29	35	40	43	47	47	49	51	54	55	56	56	56	55	55	55	54	51	49	42	36	30	26	22
B	290	20	26	31	37	40	41	42	45	48	49	49	52	53	54	52	50	50	50	48	43	35	28	22	21	20
C	300	20	25	29	33	37	38	39	39	43	44	48	48	48	48	47	47	48	45	46	36	25	19	15	25	28
C	310	24	27	30	33	35	37	34	35	42	43	43	44	42	40	40	37	35	36	36	24	20	19	18	25	30
D	320	27	29	30	32	34	34	35	30	36	35	34	34	34	33	33	30	29	31	23	17	20	21	21	24	29
D	330	25	27	27	28	28	28	28	28	28	28	27	26	26	26	26	20	25	22	17	11	13	18	20	24	28
D	340	28	30	30	31	29	29	28	27	28	32	27	24	24	24	26	22	26	22	21	18	18	22	24	28	29
D	350	33	33	35	35	33	32	31	27	27	26	25	25	25	27	29	26	30	28	27	25	25	27	29	31	31
D	360	30	31	32	31	30	29	25	24	23	21	20	20	20	21	22	23	26	26	25	24	24	26	27	27	27

PROBABILITY WITH 3000 FT WINDS CALM IS 23 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.03	1000-1500EST	.69
1000-1200EST	.15	1000-1600EST	.86
1000-1300EST	.31	1000-1700EST	.90
1000-1400EST	53	1000-1800EST	.94

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUN 17. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 40 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.



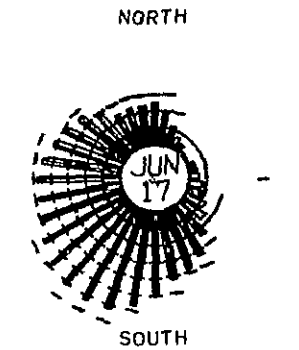


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	38	39	39	38	36	35	33	31	30	29	26	27	27	27	28	28	29	28	28	28	28	29	30	29	28
D	020	32	32	32	31	30	29	27	25	23	22	20	18	17	17	17	17	18	19	19	19	19	18	17	17	16
D	030	23	23	22	21	20	19	17	16	14	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	040	17	15	14	13	11	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	050	13	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	060	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	070	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	080	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	090	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	100	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	110	16	15	13	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	10	10	10	**	**	**
C	120	19	18	17	16	15	15	13	13	12	12	12	12	12	12	13	13	13	14	14	15	15	14	13	13	12
C	130	26	25	24	24	23	22	22	22	22	22	22	23	23	24	25	26	26	27	28	28	28	27	24	23	
B	140	32	32	32	32	31	30	31	31	31	31	31	31	30	31	32	33	35	36	37	39	40	40	40	39	39
B	150	36	36	36	36	35	36	37	37	38	38	38	39	40	41	43	45	46	47	48	49	50	51	53	55	56
A	160	33	33	33	34	34	35	37	38	38	40	40	41	43	44	44	45	46	47	48	49	50	51	52	54	55
A	170	31	32	34	35	37	38	39	41	42	44	45	46	47	47	48	50	52	54	56	58	59	59	61	62	62
A	180	30	37	38	39	42	43	44	46	47	48	50	51	53	55	56	60	63	66	68	68	67	66	62	62	63
A	190	29	37	39	44	46	46	49	50	52	53	55	57	60	62	65	65	66	66	66	66	65	65	63	61	61
A	200	30	39	43	46	49	52	55	57	59	61	63	64	65	67	68	68	67	67	67	66	65	64	63	60	61
A	210	32	39	47	50	54	56	59	62	65	67	69	70	71	71	71	71	70	69	66	63	63	62	60	62	64
A	220	35	42	50	55	57	57	64	67	69	70	71	72	75	75	74	73	70	66	62	60	61	60	60	61	67
A	230	33	41	50	54	56	59	63	65	67	69	70	71	72	72	71	70	68	64	60	59	57	56	57	57	59
A	240	31	38	47	52	54	57	60	61	63	65	65	66	67	67	67	66	65	62	59	56	54	50	49	49	50
A	250	31	37	48	52	54	55	59	61	62	64	65	66	66	66	66	66	66	65	62	59	55	52	48	48	47
A	260	26	32	43	47	49	52	54	56	57	59	60	62	62	62	62	62	62	61	59	56	51	47	42	40	38
A	270	27	35	44	48	51	53	55	57	59	60	61	62	63	63	63	63	62	61	60	59	56	44	40	38	35
B	280	25	33	39	44	47	51	51	53	55	58	59	60	60	60	59	59	59	58	55	53	46	40	34	30	26
B	290	25	31	36	42	45	46	47	50	53	54	54	57	58	59	57	55	55	55	53	48	40	33	27	26	25
C	300	23	28	32	36	40	41	42	42	46	47	51	51	51	51	50	50	51	48	49	39	28	22	18	28	31
C	310	21	24	27	30	32	34	31	32	39	40	40	41	39	37	37	34	32	33	33	21	17	16	15	22	27
D	320	17	19	20	22	24	24	25	20	26	25	24	24	24	23	23	20	19	21	13	**	10	11	11	14	19
D	330	17	19	19	20	20	20	20	20	20	20	19	18	18	18	18	12	17	14	**	**	**	10	12	16	20
D	340	25	27	27	28	26	26	25	24	25	29	24	21	21	21	23	19	23	19	18	15	15	19	21	25	26
D	350	34	34	36	36	34	33	32	28	28	27	26	26	26	28	30	27	31	29	28	26	26	28	30	32	32
D	360	36	37	38	37	36	35	31	30	29	27	26	26	26	27	28	29	32	32	31	30	30	32	33	33	33

PROBABILITY WITH 3000 FT WINDS CALM IS 25 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.06	1000-1500EST	.69
1000-1200EST	20	1000-1600EST	.81
1000-1300EST	.31	1000-1700EST	.89
1000-1400EST	.53	1000-1800EST	.93

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUN 22. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 45 PERCENT

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

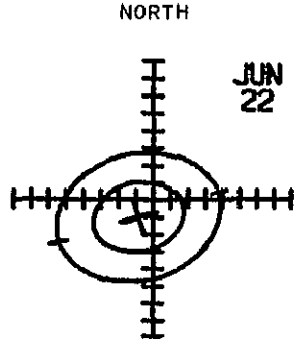


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	37	38	38	37	35	34	32	30	29	28	25	26	26	26	27	27	28	27	27	27	27	28	29	28	27
D	020	37	37	37	36	35	34	32	30	28	27	25	23	22	22	22	22	23	24	24	24	24	23	22	22	21
D	030	28	28	27	26	25	24	22	21	19	18	16	14	13	12	12	12	12	12	11	11	10	10	**	**	**
D	040	19	17	16	15	13	13	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	050	13	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	060	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	070	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	080	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	090	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	100	13	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	110	16	15	13	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	10	10	10	**	**	**
C	120	20	19	18	17	16	16	14	14	13	13	13	13	13	13	14	14	14	15	15	16	16	15	14	14	13
C	130	27	26	25	25	24	23	23	23	23	23	23	23	24	24	25	26	27	27	28	29	29	29	28	25	24
B	140	32	32	32	32	31	30	31	31	31	31	31	31	30	31	32	33	35	36	37	39	40	40	40	39	39
A	150	36	36	36	36	35	36	37	37	38	38	38	39	40	41	43	45	46	47	48	49	50	51	53	55	56
A	160	31	31	31	32	32	33	35	36	36	38	38	39	41	42	42	43	44	45	46	47	48	49	50	52	53
A	170	29	30	32	33	35	36	37	39	40	42	43	44	45	45	46	48	50	52	54	56	57	57	59	60	60
A	180	26	33	34	35	38	39	40	42	43	44	46	47	49	51	52	56	59	62	64	64	63	62	58	58	59
A	190	24	32	34	39	41	41	44	45	47	48	50	52	55	57	60	60	61	61	61	61	60	60	58	56	56
A	200	24	33	37	40	43	46	49	51	53	55	57	58	59	61	62	62	61	61	61	60	59	58	57	54	55
A	210	29	36	44	47	51	53	56	59	62	64	66	67	68	68	68	68	67	66	63	60	60	59	57	59	61
A	220	36	43	51	56	58	58	65	68	70	71	72	73	76	76	75	74	71	67	63	61	62	61	61	62	68
A	230	38	46	55	59	61	64	68	70	72	74	75	76	77	77	76	75	73	69	65	64	62	61	62	62	64
A	240	39	46	55	60	62	65	68	69	71	73	73	74	75	75	75	74	73	70	67	64	62	58	57	57	58
A	250	41	47	58	62	64	65	69	71	72	74	75	76	76	76	76	76	76	75	72	69	65	62	58	58	57
A	260	37	43	54	58	60	63	65	67	68	70	71	73	73	73	73	73	73	72	70	67	62	58	53	51	49
A	270	37	45	54	58	61	63	65	67	69	70	71	72	73	73	73	73	72	71	70	69	66	54	50	48	45
B	280	35	43	49	54	57	61	61	63	65	68	69	70	70	70	69	69	69	68	65	63	56	50	44	40	36
B	290	35	41	46	52	55	56	57	60	63	64	64	67	68	69	67	65	65	65	63	58	50	43	37	36	35
C	300	36	41	45	49	53	54	55	55	59	60	64	64	64	64	63	63	64	61	62	52	41	35	31	41	44
D	310	31	34	37	40	42	44	41	42	49	50	50	51	49	47	47	44	42	43	43	31	27	26	25	32	37
D	320	22	24	25	27	29	29	30	25	31	30	29	29	29	28	28	25	24	26	18	12	15	16	16	19	24
D	330	19	21	21	22	22	22	22	22	22	22	21	20	20	20	20	14	19	16	11	**	**	12	14	18	22
D	340	25	27	27	28	26	26	25	24	25	29	24	21	21	21	23	19	23	19	18	15	15	19	21	25	26
D	350	32	32	34	34	32	31	30	26	26	25	24	24	24	26	28	25	29	27	26	24	24	26	28	30	30
C	360	32	33	34	33	32	31	27	26	25	23	22	22	22	23	24	25	28	28	27	26	26	28	29	29	29

PROBABILITY WITH 3000 FT WINDS CALM IS 27 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.08	1000-1500EST	.68
1000-1200EST	.20	1000-1600EST	.81
1000-1300EST	.31	1000-1700EST	.88
1000-1400EST	.50	1000-1800EST	.94

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUN 27. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 46 PERCENT

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

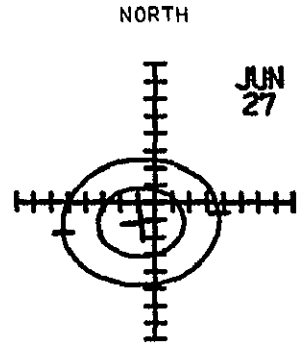


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

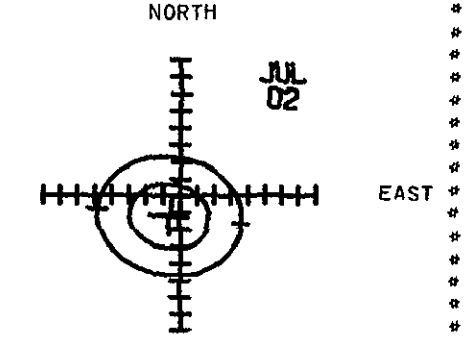
	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	28	29	29	28	26	25	23	21	20	19	16	17	17	17	18	18	19	18	18	18	18	19	20	19	18
D	020	32	32	32	31	30	29	27	25	23	22	20	18	17	17	17	17	18	19	19	19	19	18	17	17	16
D	030	26	26	25	24	23	22	20	19	17	16	14	12	11	10	10	10	10	10	**	**	**	**	**	**	**
D	040	17	15	14	13	11	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	050	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	060	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	070	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	080	15	13	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	090	16	14	12	10	**	**	**	**	**	**	**	**	**	**	**	10	10	10	**	**	**	**	**	**	**
C	100	15	14	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	110	17	16	14	13	12	11	**	**	**	**	**	**	**	**	**	**	**	**	10	11	11	11	10	**	**
C	120	21	20	19	18	17	17	15	15	14	14	14	14	14	14	15	15	15	16	16	17	17	16	15	15	14
C	130	25	24	23	23	22	21	21	21	21	21	21	22	22	23	24	25	25	26	27	27	27	26	23	22	
B	140	26	26	26	26	25	24	25	25	25	25	25	25	24	25	26	27	29	30	31	33	34	34	34	33	33
A	150	29	29	29	29	28	29	30	30	31	31	31	32	33	34	36	38	39	40	41	42	43	44	46	48	49
A	160	26	26	26	27	27	28	30	31	31	33	33	34	36	37	37	38	39	40	41	42	43	44	45	47	48
A	170	24	25	27	28	30	31	32	34	35	37	38	39	40	40	41	43	45	47	49	51	52	52	54	55	55
A	180	21	28	29	30	33	34	35	37	38	39	41	42	44	46	47	51	54	57	59	59	58	57	53	53	54
A	190	19	27	29	34	36	36	39	40	42	43	45	47	50	52	55	55	56	56	56	56	55	55	53	51	51
A	200	20	29	33	36	39	42	45	47	49	51	53	54	55	57	58	58	57	57	57	56	55	54	53	50	51
A	210	25	32	40	43	47	49	52	55	58	60	62	63	64	64	64	64	63	62	59	56	56	55	53	55	57
A	220	34	41	49	54	56	56	63	66	68	69	70	71	74	74	73	72	69	65	61	59	60	59	59	60	66
A	230	38	46	55	59	61	64	68	70	72	74	75	76	77	77	76	75	73	69	65	64	62	61	62	62	64
A	240	41	48	57	62	64	67	70	71	73	75	75	76	77	77	77	76	75	72	69	66	64	60	59	59	60
A	250	47	53	64	68	70	71	75	77	78	80	81	82	82	82	82	82	82	81	78	75	71	68	64	64	63
A	260	46	52	63	67	69	72	74	76	77	79	80	82	82	82	82	82	82	81	79	76	71	67	62	60	58
A	270	47	55	64	68	71	73	75	77	79	80	81	82	83	83	83	83	82	81	80	79	76	64	60	58	55
B	280	44	52	58	63	66	70	70	72	74	77	78	79	79	79	79	78	78	78	77	74	72	65	59	53	49	45
B	290	46	52	57	63	66	67	68	71	74	75	75	78	79	80	78	76	76	76	74	69	61	54	48	47	46
C	300	46	51	55	59	63	64	65	65	69	70	74	74	74	74	73	73	74	71	72	62	51	45	41	51	54
C	310	42	45	48	51	53	55	52	53	60	61	61	62	60	58	58	55	53	54	54	42	38	37	36	43	48
D	320	34	36	37	39	41	41	42	37	43	42	41	41	41	40	40	37	36	38	30	24	27	28	28	31	36
D	330	27	29	29	30	30	30	30	30	30	30	29	28	28	28	28	28	22	27	24	19	13	15	20	22	26	30
D	340	27	29	29	30	28	28	27	26	27	31	26	23	23	23	25	21	25	21	20	17	17	21	23	27	28
D	350	29	29	31	31	29	28	27	23	23	22	21	21	21	23	25	22	26	24	23	21	21	23	25	27	27
C	360	24	25	26	25	24	23	19	18	17	15	14	14	14	15	16	17	20	20	19	18	18	20	21	21	21

PROBABILITY WITH 3000 FT WINDS CALM IS 28 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.09	1000-1500EST	.71
1000-1200EST	.19	1000-1600EST	.80
1000-1300FST	.29	1000-1700EST	.90
1000-1400EST	.52	1000-1800EST	.96

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUL 02. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 46 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.



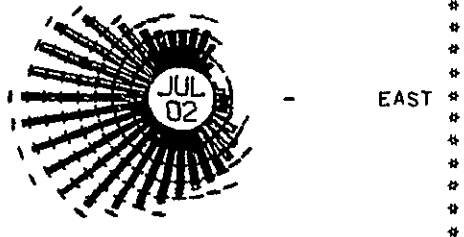


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRFCTION(DDD). LFTTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	20	21	21	20	18	17	15	13	12	11	**	**	**	**	10	10	11	10	10	10	10	11	12	11	10
D	020	24	24	24	23	22	21	19	17	15	14	12	10	**	**	**	**	10	11	11	11	11	10	**	**	**
D	030	20	20	19	18	17	16	14	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	040	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	050	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	060	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	070	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	080	16	14	11	**	**	**	**	**	**	**	**	**	**	**	10	**	**	**	**	**	**	**	**	**	**
C	090	18	16	14	12	10	**	**	**	**	**	**	**	10	11	12	12	12	11	10	**	**	**	**	**	**
C	100	17	16	13	12	10	**	**	**	**	**	**	**	**	10	11	11	11	10	**	**	**	**	**	**	**
C	110	18	17	15	14	13	12	10	10	**	**	**	**	**	**	**	**	10	10	11	12	12	12	11	10	**
B	120	21	20	19	18	17	17	15	15	14	14	14	14	14	14	15	15	15	16	16	17	17	16	15	15	14
B	130	21	20	19	19	18	17	17	17	17	17	17	17	18	18	19	20	21	21	22	23	23	23	22	19	18
A	140	19	19	19	19	18	17	18	18	18	18	18	18	17	18	19	20	22	23	24	26	27	27	27	26	26
A	150	21	21	21	21	20	21	22	22	23	23	23	24	25	26	28	30	31	32	33	34	35	36	38	40	41
A	160	19	19	19	20	20	21	23	24	24	26	26	27	29	30	30	31	32	33	34	35	36	37	38	40	41
A	170	18	19	21	22	24	25	26	28	29	31	32	33	34	34	35	37	39	41	43	45	46	46	48	49	49
A	180	17	24	25	26	29	30	31	33	34	35	37	38	40	42	43	47	50	53	55	55	54	53	49	49	50
A	190	18	26	28	33	35	35	38	39	41	42	44	46	49	51	54	54	55	55	55	55	54	54	52	50	50
A	200	19	28	32	35	38	41	44	46	48	50	52	53	54	56	57	57	56	56	56	55	54	53	52	49	50
A	210	22	29	37	40	44	46	49	52	55	57	59	60	61	61	61	61	60	59	56	53	53	52	50	52	54
A	220	31	38	46	51	53	53	60	63	65	66	67	68	71	71	70	69	66	62	58	56	57	56	56	57	63
A	230	35	43	52	56	58	61	65	67	69	71	72	73	74	74	73	72	70	66	62	61	59	58	59	59	61
A	240	40	47	56	61	63	66	69	70	72	74	74	75	76	76	76	75	74	71	68	65	63	59	58	58	59
A	250	48	54	65	69	71	72	76	78	79	81	82	83	83	83	83	83	83	82	79	76	72	69	65	65	64
A	260	51	57	68	72	74	77	79	81	82	84	85	87	87	87	87	87	87	86	84	81	76	72	67	65	63
A	270	53	61	70	74	77	79	81	83	85	86	87	88	89	89	89	89	88	87	86	85	82	70	66	64	61
B	280	51	59	65	70	73	77	77	79	81	84	85	86	86	86	85	85	85	84	81	79	72	66	60	56	52
B	290	52	58	63	69	72	73	74	77	80	81	81	84	85	86	84	82	82	82	80	75	67	60	54	53	52
B	300	50	55	59	63	67	68	69	69	73	74	78	78	78	78	77	77	78	75	76	66	55	49	45	55	58
C	310	46	49	52	55	57	59	56	57	64	65	65	66	64	62	62	59	57	58	58	46	42	41	40	47	52
D	320	40	42	43	45	47	47	48	43	49	48	47	47	47	46	46	43	42	44	36	30	33	34	34	37	42
D	330	32	34	34	35	35	35	35	35	35	34	33	33	33	33	33	27	32	29	24	18	20	25	27	31	35
D	340	30	32	32	33	31	31	30	29	30	34	29	26	26	26	28	24	28	24	23	20	20	24	26	30	31
D	350	27	27	29	29	27	26	25	21	21	20	19	19	19	21	23	20	24	22	21	19	19	21	23	25	25
D	360	18	19	20	19	18	17	13	12	11	**	**	**	**	**	10	11	14	14	13	12	12	14	15	15	15

PROBABILITY WITH 3000 FT WINDS CALM IS 27 PERCFNT TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100FST	.06	1000-1500EST	.72
1000-1200FST	.14	1000-1600EST	.83
1000-1300FST	.30	1000-1700EST	.90
1000-1400EST	.51	1000-1800EST	.95

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUL 07. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 45 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF *THE U AND V COMPONENTS*, INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

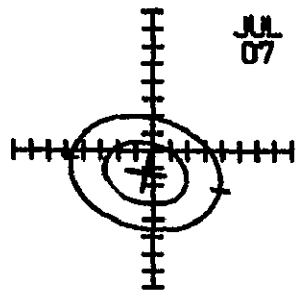


DIAGRAM ABOVE SHOWS THE AFTERNOON *THUNDERSTORM PROBABILITY* ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
D	010	12	13	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	020	15	15	15	14	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	030	14	14	13	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	040	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	050	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	060	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	070	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	080	15	13	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	090	20	18	16	14	12	11	10	10	11	11	11	11	12	13	14	14	14	13	12	11	10	**	**	**	**
C	100	19	18	15	14	12	11	10	10	10	10	10	10	10	11	11	12	13	13	12	11	11	11	10	10	**
C	110	20	19	17	16	15	14	12	12	11	10	10	**	10	10	11	11	12	12	13	14	14	14	13	12	11
B	120	21	20	19	18	17	17	15	15	14	14	14	14	14	14	15	15	15	16	16	17	17	16	15	15	14
A	130	20	19	18	18	17	16	16	16	16	16	16	16	17	17	18	19	20	20	21	22	22	22	21	18	17
A	140	18	18	18	18	17	16	17	17	17	17	17	17	16	17	18	19	21	22	23	25	26	26	26	25	25
A	150	18	18	18	18	17	18	19	19	20	20	20	21	22	23	25	27	28	29	30	31	32	33	35	37	38
A	160	16	16	16	17	17	18	20	21	21	23	23	24	26	27	27	28	29	30	31	32	33	34	35	37	38
A	170	16	17	19	20	22	23	24	26	27	29	30	31	32	32	33	35	37	39	41	43	44	44	46	47	47
A	180	17	24	25	26	29	30	31	33	34	35	37	38	40	42	43	47	50	53	55	55	54	53	49	49	50
A	190	20	28	30	35	37	37	40	41	43	44	46	48	51	53	56	56	57	57	57	57	56	56	54	52	52
A	200	22	31	35	38	41	44	47	49	51	53	55	56	57	59	60	60	59	59	59	58	57	56	55	52	53
A	210	25	32	40	43	47	49	52	55	58	60	62	63	64	64	64	64	63	62	59	56	56	55	53	55	57
A	220	32	39	47	52	54	54	61	64	66	67	68	69	72	72	71	70	67	63	59	57	58	57	57	58	64
A	230	35	43	52	56	58	61	65	67	69	71	72	73	74	74	73	72	70	66	62	61	59	58	59	59	61
A	240	38	45	54	59	61	64	67	68	70	72	72	73	74	74	74	73	72	69	66	63	61	57	56	56	57
A	250	47	53	64	68	70	71	75	77	78	80	81	82	82	82	82	82	82	81	78	75	71	68	64	64	63
A	260	50	56	67	71	73	76	78	80	81	83	84	86	86	86	86	86	86	85	83	80	75	71	66	64	62
A	270	53	61	70	74	77	79	81	83	85	86	87	88	89	89	89	89	88	87	86	85	82	70	66	64	61
B	280	50	58	64	69	72	76	76	78	80	83	84	85	85	85	84	84	84	83	80	78	71	65	59	55	51
C	290	50	56	61	67	70	71	72	75	78	79	79	82	83	84	82	80	80	80	78	73	65	58	52	51	50
C	300	46	51	55	59	63	64	65	65	69	70	74	74	74	74	73	73	74	71	72	62	51	45	41	51	54
C	310	39	42	45	48	50	52	49	50	57	58	58	59	57	55	55	52	50	51	51	39	35	34	33	40	45
C	320	34	36	37	39	41	41	42	37	43	42	41	41	41	40	40	37	36	38	30	24	27	28	28	31	36
D	330	27	29	29	30	30	30	30	30	30	30	29	28	28	28	28	22	27	24	19	13	15	20	22	26	30
D	340	23	25	25	26	24	24	23	22	23	27	22	19	19	19	21	17	21	17	16	13	13	17	19	23	24
D	350	20	20	22	22	20	19	18	14	14	13	12	12	12	14	16	13	17	15	14	12	12	14	16	18	18
D	360	10	11	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**

(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)

PROBABILITY WITH 3000 FT WINDS CALM IS 25 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.06	1000-1500EST	.71
1000-1200EST	16	1000-1600EST	.81
1000-1300EST	.34	1000-1700EST	.91
1000-1400EST	.52	1000-1800EST	.96

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUL 12 UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 44 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

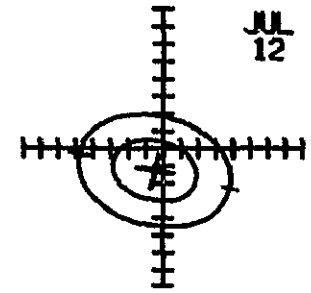


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	12	13	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	020	15	15	15	14	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	030	16	16	15	14	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	040	14	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	050	13	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	060	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	070	14	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	080	18	16	13	11	**	**	**	**	**	**	**	10	11	11	12	11	11	10	**	**	**	**	**	**	**
C	090	23	21	19	17	15	14	13	13	14	14	14	14	15	16	17	17	17	16	15	14	13	12	11	11	10
C	100	23	22	19	18	16	15	14	14	14	14	14	14	14	15	15	16	17	17	16	15	15	15	14	14	13
B	110	23	22	20	19	18	17	15	15	14	13	13	12	13	13	14	14	15	15	16	17	17	17	16	15	14
B	120	22	21	20	19	18	18	16	16	15	15	15	15	15	15	16	16	16	17	17	18	18	17	16	16	15
A	130	21	20	19	19	18	17	17	17	17	17	17	17	18	18	19	20	21	21	22	23	23	23	22	19	18
A	140	19	19	19	19	18	17	18	18	18	18	18	18	17	18	19	20	22	23	24	26	27	27	27	26	26
A	150	18	18	18	18	17	18	19	19	20	20	20	21	22	23	25	27	28	29	30	31	32	33	35	37	38
A	160	16	16	16	17	17	18	20	21	21	23	23	24	26	27	27	28	29	30	31	32	33	34	35	37	38
A	170	17	18	20	21	23	24	25	27	28	30	31	32	33	33	34	36	38	40	42	44	45	45	47	48	48
A	180	18	25	26	27	30	31	32	34	35	36	38	39	41	43	44	48	51	54	56	56	55	54	50	50	51
A	190	20	28	30	35	37	37	40	41	43	44	46	48	51	53	56	56	57	57	57	57	56	56	54	52	52
A	200	25	34	38	41	44	47	50	52	54	56	58	59	60	62	63	63	62	62	62	61	60	59	58	55	56
A	210	29	36	44	47	51	53	56	59	62	64	66	67	68	68	68	68	67	66	63	60	60	59	57	59	61
A	220	35	42	50	55	57	57	64	67	69	70	71	72	75	75	74	73	70	66	62	60	61	60	60	61	67
A	230	37	45	54	58	60	63	67	69	71	73	74	75	76	76	75	74	72	68	64	63	61	60	61	61	63
A	240	40	47	56	61	63	66	69	70	72	74	74	75	76	76	76	75	74	71	68	65	63	59	58	58	59
A	250	46	52	63	67	69	70	74	76	77	79	80	81	81	81	81	81	81	80	77	74	70	67	63	63	62
A	260	45	51	62	66	68	71	73	75	76	78	79	81	81	81	81	81	81	80	78	75	70	66	61	59	57
B	270	44	52	61	65	68	70	72	74	76	77	78	79	80	80	80	80	79	78	77	76	73	61	57	55	52
C	280	39	47	53	58	61	65	65	67	69	72	73	74	74	74	73	73	73	72	69	67	60	54	48	44	40
C	290	38	44	49	55	58	59	60	63	66	67	67	70	71	72	70	68	68	68	66	61	53	46	40	39	38
C	300	31	36	40	44	48	49	50	50	54	55	59	59	59	59	58	58	59	56	57	47	36	30	26	36	39
D	310	21	24	27	30	32	34	31	32	39	40	40	41	39	37	37	34	32	33	33	21	17	16	15	22	27
D	320	18	20	21	23	25	25	26	21	27	26	25	25	25	24	24	21	20	22	14	**	11	12	12	15	20
D	330	13	15	15	16	16	16	16	16	16	16	15	14	14	14	14	**	13	10	**	**	**	**	**	12	16
D	340	11	13	13	14	12	12	11	10	11	15	10	**	**	**	**	**	**	**	**	**	**	**	**	11	12
D	350	13	13	15	15	13	12	11	**	**	**	**	**	**	**	**	**	**	10	**	**	**	**	**	11	11
D	360	**	10	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**

PROBABILITY WITH 3000 FT WINDS CALM IS 23 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.06	1000-1500EST	.66
1000-1200EST	.17	1000-1600EST	.79
1000-1300FST	.36	1000-1700EST	.90
1000-1400EST	.52	1000-1800EST	.96

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUL 17. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 41 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

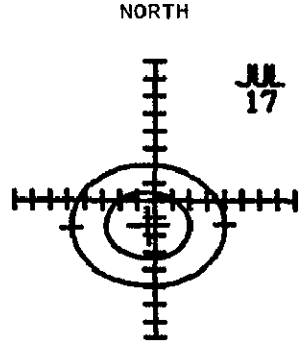


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRFCTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	22	23	23	22	20	19	17	15	14	13	10	11	11	11	12	12	13	12	12	12	12	13	14	13	12
D	020	25	25	25	24	23	22	20	18	16	15	13	11	10	10	10	10	11	12	12	12	12	11	10	10	**
D	030	26	26	25	24	23	22	20	19	17	16	14	12	11	10	10	10	10	10	**	**	**	**	**	**	**
D	040	21	19	18	17	15	15	14	13	11	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	050	17	16	13	11	**	**	**	**	**	**	10	11	10	**	**	**	**	**	**	**	**	**	**	**	**
D	060	16	14	11	**	**	**	**	**	**	**	**	11	10	10	**	**	**	**	**	**	**	**	**	**	**
C	070	18	16	13	10	**	**	**	**	**	10	10	11	12	12	12	11	10	**	**	**	**	**	**	**	**
C	080	22	20	17	15	13	13	13	12	13	13	13	14	15	15	16	15	15	14	13	10	10	**	**	**	**
B	090	24	22	20	18	16	15	14	14	15	15	15	15	16	17	18	18	18	17	16	15	14	13	12	12	11
B	100	24	23	20	19	17	16	15	15	15	15	15	15	15	16	16	17	18	18	17	16	16	16	15	15	14
B	110	23	22	20	19	18	17	15	15	14	13	13	12	13	13	14	14	15	15	16	17	17	17	16	15	14
A	120	22	21	20	19	18	18	16	16	15	15	15	15	15	15	16	16	16	17	17	18	18	17	16	16	15
A	130	22	21	20	20	19	18	18	18	18	18	18	18	19	19	20	21	22	22	23	24	24	24	23	20	19
A	140	20	20	20	20	19	18	19	19	19	19	19	19	18	19	20	21	23	24	25	27	28	28	28	27	27
A	150	19	19	19	19	18	19	20	20	21	21	21	22	23	24	26	28	29	30	31	32	33	34	36	38	39
A	160	17	17	17	18	18	19	21	22	22	24	24	25	27	28	28	29	30	31	32	33	34	35	36	38	39
A	170	17	18	20	21	23	24	25	27	28	30	31	32	33	33	34	36	38	40	42	44	45	45	47	48	48
A	180	17	24	25	26	29	30	31	33	34	35	37	38	40	42	43	47	50	53	55	55	54	53	49	49	50
A	190	19	27	29	34	36	36	39	40	42	43	45	47	50	52	55	55	56	56	56	56	55	55	53	51	51
A	200	25	34	38	41	44	47	50	52	54	56	58	59	60	62	63	63	62	62	62	61	60	59	58	55	56
A	210	31	38	46	49	53	55	58	61	64	66	68	69	70	70	70	70	69	68	65	62	62	61	59	61	63
A	220	38	45	53	58	60	60	67	70	72	73	74	75	78	78	77	76	73	69	65	63	64	63	63	64	70
A	230	40	48	57	61	63	66	70	72	74	76	77	78	79	79	78	77	75	71	67	66	64	63	64	64	66
A	240	44	51	60	65	67	70	73	74	76	78	78	79	80	80	80	79	78	75	72	69	67	63	62	62	63
A	250	49	55	66	70	72	73	77	79	80	82	83	84	84	84	84	84	84	83	80	77	73	70	66	66	65
A	260	43	49	60	64	66	69	71	73	74	76	77	79	79	79	79	79	79	79	78	76	73	68	64	59	57	55
B	270	38	46	55	59	62	64	66	68	70	71	72	73	74	74	74	74	73	72	71	70	67	55	51	49	46
C	280	33	41	47	52	55	59	59	61	63	66	67	68	68	68	67	67	67	66	63	61	54	48	42	38	34
C	290	30	36	41	47	50	51	52	55	58	59	59	62	63	64	62	60	60	60	58	53	45	38	32	31	30
C	300	20	25	29	33	37	38	39	39	43	44	48	48	48	48	47	47	48	45	46	36	25	19	15	25	28
D	310	**	**	12	15	17	19	16	17	24	25	25	26	24	22	22	19	17	18	18	**	**	**	**	**	12
D	320	**	**	**	**	**	**	10	**	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	330	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	340	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	350	13	13	15	15	13	12	11	**	**	**	**	**	**	**	**	**	**	10	**	**	**	**	**	11	11
D	360	19	20	21	20	19	18	14	13	12	10	**	**	**	10	11	12	15	15	14	13	13	15	16	16	16

PROBABILITY WITH 3000 FT WINDS CALM IS 23 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100FST	.09	1000-1500EST	.63
1000-1200EST	.15	1000-1600EST	.78
1000-1300FST	.30	1000-1700EST	.91
1000-1400EST	.49	1000-1800EST	.98

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUL 22. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 42 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

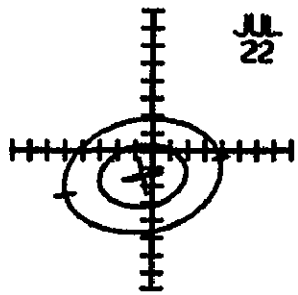


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRFCTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200FST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD) LETTER PRECEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	31	32	32	31	29	28	26	24	23	22	19	20	20	20	21	21	22	21	21	21	21	22	23	22	21
D	020	32	32	32	31	30	29	27	25	23	22	20	18	17	17	17	17	18	19	19	19	19	18	17	17	16
D	030	31	31	30	29	28	27	25	24	22	21	19	17	16	15	15	15	15	15	14	14	13	13	12	12	12
D	040	24	22	21	20	18	18	17	16	14	13	13	12	11	11	10	10	**	**	**	**	**	**	**	**	**
D	050	18	17	14	12	10	10	**	**	**	10	11	12	11	10	**	**	**	**	**	**	**	**	**	**	**
C	060	18	16	13	10	**	**	**	**	10	11	11	13	12	12	11	11	10	**	**	**	**	**	**	**	**
C	070	20	18	15	12	11	11	11	11	11	12	12	13	14	14	14	13	12	10	**	**	**	**	**	**	**
C	080	22	20	17	15	13	13	13	12	13	13	13	14	15	15	16	15	15	14	13	10	10	**	**	**	**
C	090	23	21	19	17	15	14	13	13	14	14	14	15	16	17	17	17	16	15	14	13	12	11	11	10	
B	100	22	21	18	17	15	14	13	13	13	13	13	13	13	14	14	15	16	16	15	14	14	14	13	13	12
C	110	21	20	18	17	16	15	13	13	12	11	11	10	11	11	12	12	13	13	14	15	15	15	14	13	12
B	120	20	19	18	17	16	16	14	14	13	13	13	13	13	13	14	14	14	15	15	16	16	15	14	14	13
B	130	20	19	18	18	17	16	16	16	16	16	16	16	16	17	17	18	19	20	20	21	22	22	22	21	18
A	140	18	18	18	18	17	16	17	17	17	17	17	17	17	16	17	18	19	21	22	23	25	26	26	26	25
A	150	19	19	19	19	18	19	20	20	21	21	21	22	23	24	26	28	29	30	31	32	33	34	36	38	39
A	160	18	18	18	19	19	20	22	23	23	25	25	26	28	29	29	30	31	32	33	34	35	36	37	39	40
A	170	19	20	22	23	25	26	27	29	30	32	33	34	35	35	36	38	40	42	44	46	47	47	49	50	50
A	180	19	26	27	28	31	32	33	35	36	37	39	40	42	44	45	49	52	55	57	57	56	55	51	51	52
A	190	19	27	29	34	36	36	39	40	42	43	45	47	50	52	55	55	56	56	56	55	55	53	51	51	
A	200	25	34	38	41	44	47	50	52	54	56	58	59	60	62	63	63	62	62	62	61	60	59	58	55	56
A	210	33	40	48	51	55	57	60	63	66	68	70	71	72	72	72	72	71	70	67	64	64	63	61	63	65
A	220	40	47	55	60	62	62	69	72	74	75	76	77	80	80	79	78	75	71	67	65	66	65	65	66	72
A	230	43	51	60	64	66	69	73	75	77	79	80	81	82	82	81	80	78	74	70	69	67	66	67	67	69
A	240	49	56	65	70	72	75	78	79	81	83	83	84	85	85	85	84	83	80	77	74	72	68	67	67	68
A	250	53	59	70	74	76	77	81	83	84	86	87	88	88	88	88	88	88	87	84	81	77	74	70	70	69
A	260	47	53	64	68	70	73	75	77	78	80	81	83	83	83	83	83	83	82	80	77	72	68	63	61	59
A	270	44	52	61	65	68	70	72	74	76	77	78	79	80	80	80	80	79	78	77	76	73	61	57	55	52
B	280	42	50	56	61	64	68	68	70	72	75	76	77	77	77	76	76	76	75	72	70	63	57	51	47	43
C	290	39	45	50	56	59	60	61	64	67	68	68	71	72	73	71	69	69	69	67	62	54	47	41	40	39
D	300	29	34	38	42	46	47	48	48	52	53	57	57	57	57	56	56	57	54	55	45	34	28	24	34	37
D	310	14	17	20	23	25	27	24	25	32	33	33	34	32	30	30	27	25	26	26	14	10	**	**	15	20
D	320	**	**	10	12	14	14	15	10	16	15	14	14	14	13	13	10	**	11	**	**	**	**	**	**	**
D	330	**	**	**	10	10	10	10	10	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	10
D	340	**	11	11	12	10	10	**	**	**	13	**	**	**	**	**	**	**	**	**	**	**	**	**	**	10
D	350	19	19	21	21	19	18	17	13	13	12	11	11	11	13	15	12	16	14	13	11	11	13	15	17	17
D	360	29	30	31	30	29	28	24	23	22	20	19	19	19	20	21	22	25	25	24	23	23	25	26	26	26

PROBABILITY WITH 3000 FT WINDS CALM IS 26 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.09	1000-1500EST	.66
1000-1200EST	.14	1000-1600EST	.78
1000-1300EST	.31	1000-1700EST	.90
1000-1400EST	.47	1000-1800EST	.96

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON JUL 27. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 48 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

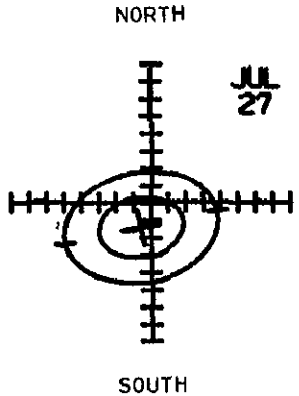


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE. DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	33	34	34	33	31	30	28	26	25	24	21	22	22	22	23	23	24	23	23	23	23	24	25	24	23
D	020	31	31	31	30	29	28	26	24	22	21	19	17	16	16	16	16	17	18	18	18	18	17	16	16	15
D	030	27	27	26	25	24	23	21	20	18	17	15	13	12	11	11	11	11	11	10	10	**	**	**	**	**
D	040	20	18	17	16	14	14	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	050	16	15	12	10	**	**	**	**	**	**	**	10	**	**	**	**	**	**	**	**	**	**	**	**	**
D	060	15	13	10	**	**	**	**	**	**	**	**	10	**	**	**	**	**	**	**	**	**	**	**	**	**
D	070	17	15	12	**	**	**	**	**	**	**	**	10	11	11	11	10	**	**	**	**	**	**	**	**	**
C	080	18	16	13	11	**	**	**	**	**	**	**	10	11	11	12	11	11	10	**	**	**	**	**	**	**
C	090	18	16	14	12	10	**	**	**	**	**	**	**	10	11	12	12	12	11	10	**	**	**	**	**	**
C	100	16	15	12	11	**	**	**	**	**	**	**	**	**	**	**	**	10	10	**	**	**	**	**	**	**
C	110	15	14	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	120	15	14	13	12	11	11	**	**	**	**	**	**	**	**	**	**	**	10	10	11	11	10	**	**	**
A	130	16	15	14	14	13	12	12	12	12	12	12	12	13	13	14	15	16	16	17	18	18	18	17	14	13
A	140	15	15	15	15	14	13	14	14	14	14	14	14	13	14	15	16	18	19	20	22	23	23	23	22	22
A	150	17	17	17	17	16	17	18	18	19	19	19	20	21	22	24	26	27	28	29	30	31	32	34	36	37
A	160	18	18	18	19	19	20	22	23	23	25	25	26	28	29	29	30	31	32	33	34	35	36	37	39	40
A	170	21	22	24	25	27	28	29	31	32	34	35	36	37	37	38	40	42	44	46	48	49	49	51	52	52
A	180	22	29	30	31	34	35	36	38	39	40	42	43	45	47	48	52	55	58	60	60	59	58	54	54	55
A	190	21	29	31	36	38	38	41	42	44	45	47	49	52	54	57	57	58	58	58	58	57	57	55	53	53
A	200	25	34	38	41	44	47	50	52	54	56	58	59	60	62	63	63	62	62	62	61	60	59	58	55	56
A	210	32	39	47	50	54	56	59	62	65	67	69	70	71	71	71	71	70	69	66	63	63	62	60	62	64
A	220	39	46	54	59	61	61	68	71	73	74	75	76	79	79	78	77	74	70	66	64	65	64	64	65	71
A	230	42	50	59	63	65	68	72	74	76	78	79	80	81	81	80	79	77	73	69	68	66	65	66	66	68
A	240	49	56	65	70	72	75	78	79	81	83	83	84	85	85	85	84	83	80	77	74	72	68	67	67	68
A	250	56	62	73	77	79	80	84	86	87	89	90	91	91	91	91	91	91	90	87	84	80	77	73	73	72
A	260	52	58	69	73	75	78	80	82	83	85	86	88	88	88	88	88	88	87	85	82	77	73	68	66	64
A	270	53	61	70	74	77	79	81	83	85	86	87	88	89	89	89	89	88	87	86	85	82	70	66	64	61
A	280	52	60	66	71	74	78	78	80	82	85	86	87	87	87	86	86	86	85	82	80	73	67	61	57	53
C	290	51	57	62	68	71	72	73	76	79	80	80	83	84	85	83	81	81	81	79	74	66	59	53	52	51
D	300	47	52	56	60	64	65	66	66	70	71	75	75	75	75	74	74	75	72	73	63	52	46	42	52	55
D	310	39	42	45	48	50	52	49	50	57	58	58	59	57	55	55	52	50	51	51	39	35	34	33	40	45
D	320	32	34	35	37	39	39	40	35	41	40	39	39	39	38	38	35	34	36	28	22	25	26	26	29	34
D	330	26	28	28	29	29	29	29	29	29	29	28	27	27	27	27	21	26	23	18	12	14	19	21	25	29
D	340	24	26	26	27	25	25	24	23	24	28	23	20	20	20	22	18	22	18	17	14	14	18	20	24	25
D	350	26	26	28	28	26	25	24	20	20	19	18	18	18	20	22	19	23	21	20	18	18	20	22	24	24
D	360	31	32	33	32	31	30	26	25	24	22	21	21	21	22	23	24	27	27	26	25	25	27	28	28	28

PROBABILITY WITH 3000 FT WINDS CALM IS 29 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.06	1000-1500EST	.65
1000-1200EST	.15	1000-1600EST	.82
1000-1300EST	.29	1000-1700EST	.90
1000-1400EST	.42	1000-1800EST	.96

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON AUG 01. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 51 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

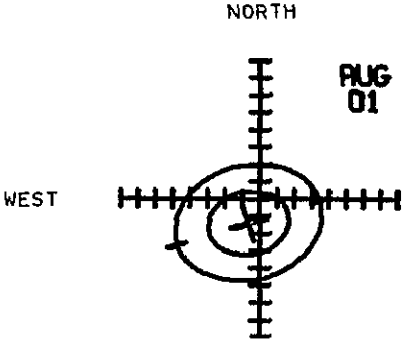


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	16	17	17	16	14	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	020	17	17	17	16	15	14	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	030	15	15	14	13	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	040	14	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	050	15	14	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	060	15	13	10	**	**	**	**	**	**	**	**	10	**	**	**	**	**	**	**	**	**	**	**	**	**
D	070	16	14	11	**	**	**	**	**	**	**	**	**	10	10	10	**	**	**	**	**	**	**	**	**	**
D	080	17	15	12	10	**	**	**	**	**	**	**	**	10	10	11	10	10	**	**	**	**	**	**	**	**
D	090	17	15	13	11	**	**	**	**	**	**	**	**	**	10	11	11	11	10	**	**	**	**	**	**	**
C	100	15	14	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	110	15	14	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	120	15	14	13	12	11	11	**	**	**	**	**	**	**	**	**	**	**	10	10	11	11	10	**	**	**
A	130	16	15	14	14	13	12	12	12	12	12	12	12	13	13	14	15	16	16	17	18	18	18	17	14	13
A	140	14	14	14	14	13	12	13	13	13	13	13	13	12	13	14	15	17	18	19	21	22	22	22	21	21
A	150	16	16	16	16	15	16	17	17	18	18	18	19	20	21	23	25	26	27	28	29	30	31	33	35	36
A	160	17	17	17	18	18	19	21	22	22	24	24	25	27	28	28	29	30	31	32	33	34	35	36	38	39
A	170	21	22	24	25	27	28	29	31	32	34	35	36	37	37	38	40	42	44	46	48	49	49	51	52	52
A	180	23	30	31	32	35	36	37	39	40	41	43	44	46	48	49	53	56	59	61	61	60	59	55	55	56
A	190	23	31	33	38	40	40	43	44	46	47	49	51	54	56	59	59	60	60	60	60	59	59	57	55	55
A	200	24	33	37	40	43	46	49	51	53	55	57	58	59	61	62	62	61	61	61	60	59	58	57	54	55
A	210	29	36	44	47	51	53	56	59	62	64	66	67	68	68	68	68	67	66	63	60	60	59	57	59	61
A	220	34	41	49	54	56	56	63	66	68	69	70	71	74	74	73	72	69	65	61	59	60	59	59	60	66
A	230	37	45	54	58	60	63	67	69	71	73	74	75	76	76	75	74	72	68	64	63	61	60	61	61	63
A	240	45	52	61	66	68	71	74	75	77	79	79	80	81	81	81	80	79	76	73	70	68	64	63	63	64
A	250	54	60	71	75	77	78	82	84	85	87	88	89	89	89	89	89	89	88	85	82	78	75	71	71	70
A	260	53	59	70	74	76	79	81	83	84	86	87	89	89	89	89	89	89	88	86	83	78	74	69	67	65
A	270	55	63	72	76	79	81	83	85	87	88	89	90	91	91	91	91	90	89	88	87	84	72	68	66	63
A	280	56	64	70	75	78	82	82	84	86	89	90	91	91	91	90	90	90	89	86	84	77	71	65	61	57
B	290	56	62	67	73	76	77	78	81	84	85	85	88	89	90	88	86	86	86	84	79	71	64	58	57	56
C	300	54	59	63	67	71	72	73	73	77	78	82	82	82	82	81	81	82	79	80	70	59	53	49	59	62
C	310	52	55	58	61	63	65	62	63	70	71	71	72	70	68	68	65	63	64	64	52	48	47	46	53	58
D	320	51	53	54	56	58	58	59	54	60	59	58	58	58	57	57	54	53	55	47	41	44	45	45	48	53
D	330	45	47	47	48	48	48	48	48	48	48	47	46	46	46	46	40	45	42	37	31	33	38	40	44	48
D	340	39	41	41	42	40	40	39	38	39	43	38	35	35	35	37	33	37	33	32	29	29	33	35	39	40
D	350	29	29	31	31	29	28	27	23	23	22	21	21	21	23	25	22	26	24	23	21	21	23	25	27	27
D	360	14	15	16	15	14	13	**	**	**	**	**	**	**	**	**	**	**	10	10	**	**	**	10	11	11	11

PROBABILITY WITH 3000 FT WINDS CALM IS 29 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.08	1000-1500EST	.66
1000-1200EST	.22	1000-1600EST	.80
1000-1300EST	.37	1000-1700EST	.87
1000-1400EST	.46	1000-1800EST	.95

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON AUG 06. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 48 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

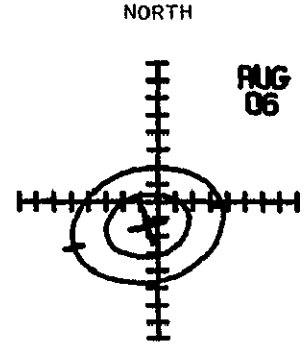


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
D	010	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	020	10	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	030	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	040	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	050	18	17	14	12	10	10	**	**	**	10	11	12	11	10	**	**	**	**	**	**	**	**	**	**	**
C	060	19	17	14	11	10	10	10	10	11	12	12	14	13	13	12	12	11	**	**	**	**	**	**	**	**
C	070	22	20	17	14	13	13	13	13	13	14	14	15	16	16	16	15	14	12	10	10	**	**	**	**	**
C	080	25	23	20	18	16	16	16	15	16	16	16	17	18	18	19	18	18	17	16	13	13	12	12	11	11
C	090	24	22	20	18	16	15	14	14	15	15	15	15	16	17	18	18	18	17	16	15	14	13	12	12	11
B	100	23	22	19	18	16	15	14	14	14	14	14	14	15	15	16	17	17	16	15	15	15	14	14	13	
B	110	23	22	20	19	18	17	15	15	14	13	13	12	13	13	14	14	15	15	16	17	17	17	16	15	14
A	120	22	21	20	19	18	18	16	16	15	15	15	15	15	15	16	16	16	17	17	18	18	17	16	16	15
A	130	22	21	20	20	19	18	18	18	18	18	18	18	19	19	20	21	22	22	23	24	24	24	23	20	19
A	140	18	18	18	18	17	16	17	17	17	17	17	17	16	17	18	19	21	22	23	25	26	26	26	25	25
A	150	17	17	17	17	16	17	18	18	19	19	19	20	21	22	24	26	27	28	29	30	31	32	34	36	37
A	160	17	17	17	18	18	19	21	22	22	24	24	25	27	28	28	29	30	31	32	33	34	35	36	38	39
A	170	21	22	24	25	27	28	29	31	32	34	35	36	37	37	38	40	42	44	46	48	49	49	51	52	52
A	180	24	31	32	33	36	37	38	40	41	42	44	45	47	49	50	54	57	60	62	62	61	60	56	56	57
A	190	24	32	34	39	41	41	44	45	47	48	50	52	55	57	60	60	61	61	61	61	60	60	58	56	56
A	200	25	34	38	41	44	47	50	52	54	56	58	59	60	62	63	63	62	62	62	61	60	59	58	55	56
A	210	27	34	42	45	49	51	54	57	60	62	64	65	66	66	66	66	65	64	61	58	58	57	55	57	59
A	220	31	38	46	51	53	53	60	63	65	66	67	68	71	71	70	69	66	62	58	56	57	56	56	57	63
A	230	32	40	49	53	55	58	62	64	66	68	69	70	71	71	70	69	67	63	59	58	56	55	56	56	58
A	240	39	46	55	60	62	65	68	69	71	73	73	74	75	75	75	74	73	70	67	64	62	58	57	57	58
A	250	48	54	65	69	71	72	76	78	79	81	82	83	83	83	83	83	83	82	79	76	72	69	65	65	64
A	260	48	54	65	69	71	74	76	78	79	81	82	84	84	84	84	84	84	83	81	78	73	69	64	62	60
A	270	50	58	67	71	74	76	78	80	82	83	84	85	86	86	86	86	85	84	83	82	79	67	63	61	58
B	280	49	57	63	68	71	75	75	77	79	82	83	84	84	84	83	83	83	82	79	77	70	64	58	54	50
B	290	49	55	60	66	69	70	71	74	77	78	78	81	82	83	81	79	79	79	77	72	64	57	51	50	49
C	300	50	55	59	63	67	68	69	69	73	74	78	78	78	78	77	77	78	75	76	66	55	49	45	55	58
C	310	52	55	58	61	63	65	62	63	70	71	71	72	70	68	68	65	63	64	64	52	48	47	46	53	58
D	320	59	61	62	64	66	66	67	62	68	67	66	66	66	65	65	62	61	63	55	49	52	53	53	56	61
D	330	58	60	60	61	61	61	61	61	61	61	60	59	59	59	59	53	58	55	50	44	46	51	53	57	61
D	340	48	50	50	51	49	49	48	47	48	52	47	44	44	44	46	42	46	42	41	38	38	42	44	48	49
D	350	28	28	30	30	28	27	26	22	22	21	20	20	20	22	24	21	25	23	22	20	20	22	24	26	26
D	360	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**

PROBABILITY WITH 3000 FT WINDS CALM IS 29 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.08	1000-1500EST	.61
1000-1200EST	.24	1000-1600EST	.78
1000-1300EST	.37	1000-1700EST	.83
1000-1400EST	.44	1000-1800EST	.90

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON AUG 11. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 45 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

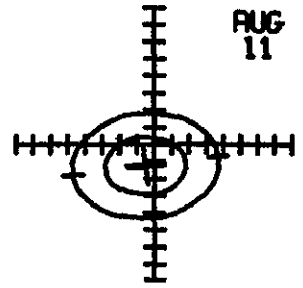


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
D	010	11	12	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	020	14	14	14	13	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	030	13	13	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	040	15	13	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	050	21	20	17	15	13	13	12	11	12	13	14	15	14	13	12	11	10	**	**	**	**	**	**	**	**
C	060	24	22	19	16	15	15	15	15	16	17	17	19	18	18	17	17	16	14	13	11	**	**	**	**	**
C	070	28	26	23	20	19	19	19	19	19	20	20	21	22	22	22	21	20	18	16	16	14	13	12	11	10
C	080	31	29	26	24	22	22	22	21	22	22	22	23	24	24	25	24	24	23	22	19	19	18	18	17	17
B	090	30	28	26	24	22	21	20	20	21	21	21	21	22	23	24	24	24	23	22	21	20	19	18	18	17
A	100	29	28	25	24	22	21	20	20	20	20	20	20	21	21	22	23	23	22	21	21	21	20	20	19	
A	110	29	28	26	25	24	23	21	21	20	19	19	18	19	19	20	20	21	21	22	23	23	23	22	21	20
A	120	29	28	27	26	25	25	23	23	22	22	22	22	22	22	23	23	23	24	24	25	25	24	23	23	22
A	130	28	27	26	26	25	24	24	24	24	24	24	24	25	25	26	27	28	28	29	30	30	30	29	26	25
A	140	24	24	24	24	23	22	23	23	23	23	23	23	22	23	24	25	27	28	29	31	32	32	32	31	31
A	150	22	22	22	22	21	22	23	23	24	24	24	25	26	27	29	31	32	33	34	35	36	37	39	41	42
A	160	19	19	19	20	20	21	23	24	24	26	26	27	29	30	30	31	32	33	34	35	36	37	38	40	41
A	170	21	22	24	25	27	28	29	31	32	34	35	36	37	37	38	40	42	44	46	48	49	49	51	52	52
A	180	23	30	31	32	35	36	37	39	40	41	43	44	46	48	49	53	56	59	61	61	60	59	55	55	56
A	190	25	33	35	40	42	42	45	46	48	49	51	53	56	58	61	61	62	62	62	62	61	61	59	57	57
A	200	26	35	39	42	45	48	51	53	55	57	59	60	61	63	64	64	63	63	63	62	61	60	59	56	57
A	210	29	36	44	47	51	53	56	59	62	64	66	67	68	68	68	68	67	66	63	60	60	59	57	59	61
A	220	32	39	47	52	54	54	61	64	66	67	68	69	72	72	71	70	67	63	59	57	58	57	57	58	64
A	230	32	40	49	53	55	58	62	64	66	68	69	70	71	71	70	69	67	63	59	58	56	55	56	56	58
A	240	37	44	53	58	60	63	66	67	69	71	71	72	73	73	73	72	71	68	65	62	60	56	55	55	56
A	250	43	49	60	64	66	67	71	73	74	76	77	78	78	78	78	78	78	77	74	71	67	64	60	60	59
B	260	40	46	57	61	63	66	68	70	71	73	74	76	76	76	76	76	76	75	73	70	65	61	56	54	52
B	270	39	47	56	60	63	65	67	69	71	72	73	74	75	75	75	75	74	73	72	71	68	56	52	50	47
C	280	36	44	50	55	58	62	62	64	66	69	70	71	71	71	70	70	70	69	66	64	57	51	45	41	37
C	290	38	44	49	55	58	59	60	63	66	67	67	70	71	72	70	68	68	68	66	61	53	46	40	39	38
C	300	41	46	50	54	58	59	60	60	64	65	69	69	69	69	68	68	69	66	67	57	46	40	36	46	49
C	310	47	50	53	56	58	60	57	58	65	66	66	67	65	63	63	60	58	59	59	47	43	42	41	48	53
C	320	58	60	61	63	65	65	66	61	67	66	65	65	64	64	61	60	62	54	48	51	52	52	55	60	
D	330	59	61	61	62	62	62	62	62	62	62	61	60	60	60	60	54	59	56	51	45	47	52	54	58	62
D	340	45	47	47	48	46	46	45	44	45	49	44	41	41	41	43	39	43	39	38	35	35	39	41	45	46
D	350	23	23	25	25	23	22	21	17	17	16	15	15	15	17	19	16	20	18	17	15	15	17	19	21	21
D	360	**	10	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**

(NOTE. DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)

PROBABILITY WITH 3000 FT WINDS CALM IS 30 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.14	1000-1500EST	.65
1000-1200EST	.28	1000-1600EST	.79
1000-1300EST	.44	1000-1700EST	.84
1000-1400EST	.53	1000-1800EST	.89

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON AUG 16. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 42 PERCENT

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

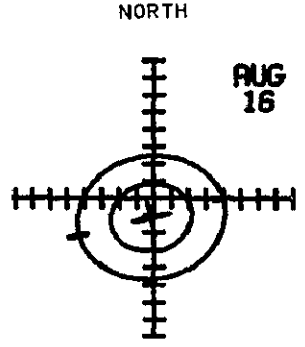


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
D	010	18	19	19	18	16	15	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	10	**	**
D	020	21	21	21	20	19	18	16	14	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	030	20	20	19	18	17	16	14	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	040	20	18	17	16	14	14	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	050	24	23	20	18	16	15	14	15	16	17	18	17	16	15	14	13	12	11	10	**	**	**	**	**	**
C	060	26	24	21	18	17	17	17	17	18	19	19	21	20	20	19	19	18	16	15	13	11	10	**	**	**
B	070	30	28	25	22	21	21	21	21	21	22	22	23	24	24	24	23	22	20	18	18	16	15	14	13	12
B	080	32	30	27	25	23	23	23	22	23	23	23	24	25	25	26	25	25	24	23	20	20	19	19	18	18
A	090	31	29	27	25	23	22	21	21	22	22	22	22	23	24	25	25	25	24	23	22	21	20	19	19	18
A	100	31	30	27	26	24	23	22	22	22	22	22	22	23	23	24	25	25	24	23	23	23	23	22	22	21
A	110	31	30	28	27	26	25	23	23	22	21	21	20	21	21	22	22	23	23	24	25	25	25	24	23	22
A	120	32	31	30	29	28	28	26	26	25	25	25	25	25	25	26	26	26	27	27	28	28	27	26	26	25
A	130	32	31	30	30	29	28	28	28	28	28	28	28	29	29	30	31	32	32	33	34	34	34	33	30	29
A	140	27	27	27	27	26	25	26	26	26	26	26	26	25	26	27	28	30	31	32	34	35	35	35	34	34
A	150	23	23	23	23	22	23	24	24	25	25	25	26	27	28	30	32	33	34	35	36	37	38	40	42	43
A	160	19	19	19	20	20	21	23	24	24	26	26	27	29	30	30	31	32	33	34	35	36	37	38	40	41
A	170	19	20	22	23	25	26	27	29	30	32	33	34	35	35	36	38	40	42	44	46	47	47	49	50	50
A	180	20	27	28	29	32	33	34	36	37	38	40	41	43	45	46	50	53	56	58	58	57	56	52	52	53
A	190	23	31	33	38	40	40	43	44	46	47	49	51	54	56	59	59	60	60	60	60	59	59	57	55	55
A	200	26	35	39	42	45	48	51	53	55	57	59	60	61	63	64	64	63	63	63	62	61	60	59	56	57
A	210	31	38	46	49	53	55	58	61	64	66	68	69	70	70	70	70	69	68	65	62	62	61	59	61	63
A	220	35	42	50	55	57	57	64	67	69	70	71	72	75	75	74	73	70	66	62	60	61	60	60	61	67
A	230	36	44	53	57	59	62	66	68	70	72	73	74	75	75	74	73	71	67	63	62	60	59	60	60	62
A	240	38	45	54	59	61	64	67	68	70	72	72	73	74	74	74	73	72	69	66	63	61	57	56	56	57
A	250	40	46	57	61	63	64	68	70	71	73	74	75	75	75	75	75	75	74	71	68	64	61	57	57	56
B	260	33	39	50	54	56	59	61	63	64	66	67	69	69	69	69	69	69	68	66	63	58	54	49	47	45
B	270	30	38	47	51	54	56	58	60	62	63	64	65	66	66	66	66	65	64	63	62	59	47	43	41	38
B	280	28	36	42	47	50	54	54	56	58	61	62	63	63	63	62	62	62	61	58	56	49	43	37	33	29
B	290	31	37	42	48	51	52	53	56	59	60	60	63	64	65	63	61	61	61	59	54	46	39	33	32	31
C	300	37	42	46	50	54	55	56	56	60	61	65	65	65	65	64	64	65	62	63	53	42	36	32	42	45
C	310	43	46	49	52	54	56	53	54	61	62	62	63	61	59	59	56	54	55	55	43	39	38	37	44	49
D	320	50	52	53	55	57	57	58	53	59	58	57	57	57	56	56	53	52	54	46	40	43	44	44	47	52
D	330	46	48	48	49	49	49	49	49	49	49	48	47	47	47	47	41	46	43	38	32	34	39	41	45	49
D	340	32	34	34	35	33	33	32	31	32	36	31	28	28	28	30	26	30	26	25	22	22	26	28	32	33
D	350	19	19	21	21	19	18	17	13	13	12	11	11	11	13	15	12	16	14	13	11	11	13	15	17	17
C	360	14	15	16	15	14	13	**	**	**	**	**	**	**	**	**	**	10	10	**	**	**	10	11	11	11

PROBABILITY WITH 3000 FT WINDS CALM IS 29 PERCENT TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.12	1000-1500EST	.61
1000-1200EST	.24	1000-1600EST	.80
1000-1300EST	.38	1000-1700EST	.85
1000-1400EST	.48	1000-1800EST	.90

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON AUG 21. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 42 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

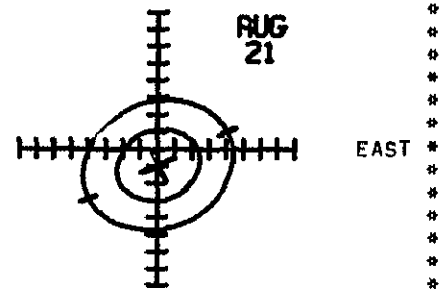


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

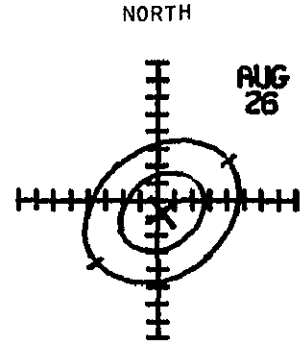
	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
C	010	24	25	25	24	22	21	19	17	16	15	12	13	13	13	14	14	15	14	14	14	14	15	16	15	14
C	020	27	27	27	26	25	24	22	20	18	17	15	13	12	12	12	12	13	14	14	14	14	13	12	12	11
B	030	26	26	25	24	23	22	20	19	17	16	14	12	11	10	10	10	10	10	**	**	**	**	**	**	**
B	040	27	25	24	23	21	21	20	19	17	16	16	15	14	14	13	13	12	11	10	10	**	**	**	**	**
C	050	28	27	24	22	20	20	19	18	19	20	21	22	21	20	19	18	17	16	15	14	12	10	10	10	10
C	060	27	25	22	19	18	18	18	18	19	20	20	22	21	21	20	20	19	17	16	14	12	11	10	**	**
A	070	29	27	24	21	20	20	20	20	20	21	21	22	23	23	23	22	21	19	17	17	15	14	13	12	11
A	080	30	28	25	23	21	21	21	20	21	21	21	22	23	23	24	23	23	22	21	18	18	17	17	16	16
A	090	29	27	25	23	21	20	19	19	20	20	20	20	21	22	23	23	23	22	21	20	19	18	17	17	16
A	100	28	27	24	23	21	20	19	19	19	19	19	19	19	20	20	21	22	22	21	20	20	20	19	19	18
A	110	29	28	26	25	24	23	21	21	20	19	19	18	19	19	20	20	21	21	22	23	23	23	22	21	20
A	120	29	28	27	26	25	25	23	23	22	22	22	22	22	22	23	23	23	24	24	25	25	24	23	23	22
A	130	30	29	28	28	27	26	26	26	26	26	26	26	27	27	28	29	30	30	31	32	32	32	31	28	27
A	140	26	26	26	26	25	24	25	25	25	25	25	25	24	25	26	27	29	30	31	33	34	34	34	33	33
A	150	21	21	21	21	20	21	22	22	23	23	23	24	25	26	28	30	31	32	33	34	35	36	38	40	41
A	160	16	16	16	17	17	18	20	21	21	23	23	24	26	27	27	28	29	30	31	32	33	34	35	37	38
A	170	16	17	19	20	22	23	24	26	27	29	30	31	32	32	33	35	37	39	41	43	44	44	46	47	47
A	180	17	24	25	26	29	30	31	33	34	35	37	38	40	42	43	47	50	53	55	55	54	53	49	49	50
A	190	19	27	29	34	36	36	39	40	42	43	45	47	50	52	55	55	56	56	56	56	55	55	53	51	51
A	200	23	32	36	39	42	45	48	50	52	54	56	57	58	60	61	61	60	60	60	59	58	57	56	53	54
A	210	29	36	44	47	51	53	56	59	62	64	66	67	68	68	68	68	67	66	63	60	60	59	57	59	61
A	220	35	42	50	55	57	57	64	67	69	70	71	72	75	75	74	73	70	66	62	60	61	60	60	61	67
A	230	36	44	53	57	59	62	66	68	70	72	73	74	75	75	74	73	71	67	63	62	60	59	60	60	62
B	240	38	45	54	59	61	64	67	68	70	72	72	73	74	74	74	73	72	69	66	63	61	57	56	56	57
B	250	39	45	56	60	62	63	67	69	70	72	73	74	74	74	74	74	74	73	70	67	63	60	56	56	55
B	260	31	37	48	52	54	57	59	61	62	64	65	67	67	67	67	67	67	66	64	61	56	52	47	45	43
B	270	29	37	46	50	53	55	57	59	61	62	63	64	65	65	65	65	64	63	62	61	58	46	42	40	37
B	280	29	37	43	48	51	55	55	57	59	62	63	64	64	64	63	63	63	62	59	57	50	44	38	34	30
C	290	33	39	44	50	53	54	55	58	61	62	62	65	66	67	65	63	63	63	61	56	48	41	35	34	33
C	300	37	42	46	50	54	55	56	56	60	61	65	65	65	65	64	64	65	62	63	53	42	36	32	42	45
C	310	41	44	47	50	52	54	51	52	59	60	60	61	59	57	57	54	52	53	53	41	37	36	35	42	47
D	320	42	44	45	47	49	49	50	45	51	50	49	49	49	48	48	45	44	46	38	32	35	36	36	39	44
D	330	35	37	37	38	38	38	38	38	38	38	37	36	36	36	36	30	35	32	27	21	23	28	30	34	38
D	340	25	27	27	28	26	26	25	24	25	29	24	21	21	21	23	19	23	19	18	15	15	19	21	25	26
D	350	21	21	23	23	21	20	19	15	15	14	13	13	13	15	17	14	18	16	15	13	13	15	17	19	19
C	360	20	21	22	21	20	19	15	14	13	11	10	10	10	11	12	13	16	16	15	14	14	16	17	17	17

PROBABILITY WITH 3000 FT WINDS CALM IS 28 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.12	1000-1500EST	.62
1000-1200EST	.22	1000-1600EST	.77
1000-1300EST	.34	1000-1700EST	.83
1000-1400EST	.49	1000-1800EST	.91

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON AUG 26. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 33 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.



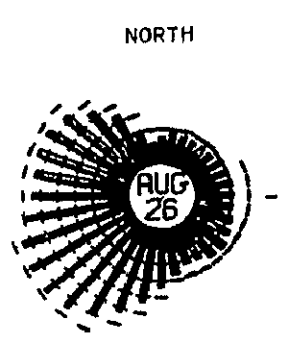


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																										
B	010	27	28	28	27	25	24	22	20	19	18	15	16	16	16	17	17	18	17	17	17	17	18	19	18	17
C	020	29	29	29	28	27	26	24	22	20	19	17	15	14	14	14	14	15	16	16	16	16	15	14	14	13
B	030	30	30	29	28	27	26	24	23	21	20	18	16	15	14	14	14	14	14	13	13	12	12	11	11	11
A	040	32	30	29	28	26	26	25	24	22	21	21	20	19	19	18	18	17	16	15	15	14	13	13	13	13
B	050	32	31	28	26	24	24	23	22	23	24	25	26	25	24	23	22	21	20	19	18	16	14	14	14	14
B	060	29	27	24	21	20	20	20	20	21	22	22	24	23	23	22	22	21	19	18	16	14	13	12	11	11
A	070	28	26	23	20	19	19	19	19	19	20	20	21	22	22	22	21	20	18	16	16	14	13	12	11	10
A	080	26	24	21	19	17	17	17	16	17	17	17	18	19	19	20	19	19	18	17	14	14	13	13	12	12
A	090	23	21	19	17	15	14	13	13	14	14	14	14	15	16	17	17	17	16	15	14	13	12	11	11	10
A	100	22	21	18	17	15	14	13	13	13	13	13	13	13	14	14	15	16	16	15	14	14	14	13	13	12
A	110	23	22	20	19	18	17	15	15	14	13	13	12	13	13	14	14	15	15	16	17	17	17	16	15	14
A	120	24	23	22	21	20	20	18	18	17	17	17	17	17	17	18	18	18	19	19	20	20	19	18	18	17
A	130	25	24	23	23	22	21	21	21	21	21	21	21	22	22	23	24	25	25	26	27	27	27	26	23	22
B	140	22	22	22	22	21	20	21	21	21	21	21	21	20	21	22	23	25	26	27	29	30	30	30	29	29
B	150	19	19	19	19	18	19	20	20	21	21	21	22	23	24	26	28	29	30	31	32	33	34	36	38	39
A	160	16	16	16	17	17	18	20	21	21	23	23	24	26	27	27	28	29	30	31	32	33	34	35	37	38
A	170	16	17	19	20	22	23	24	26	27	29	30	31	32	32	33	35	37	39	41	43	44	44	46	47	47
A	180	18	25	26	27	30	31	32	34	35	36	38	39	41	43	44	48	51	54	56	56	55	54	50	50	51
A	190	19	27	29	34	36	36	39	40	42	43	45	47	50	52	55	55	56	56	56	56	55	55	53	51	51
A	200	21	30	34	37	40	43	46	48	50	52	54	55	56	58	59	59	58	58	58	57	56	55	54	51	52
A	210	26	33	41	44	48	50	53	56	59	61	63	64	65	65	65	65	64	63	60	57	57	56	54	56	58
B	220	32	39	47	52	54	54	61	64	66	67	68	69	72	72	71	70	67	63	59	57	58	57	57	58	64
B	230	32	40	49	53	55	58	62	64	66	68	69	70	71	71	70	69	67	63	59	58	56	55	56	56	58
C	240	34	41	50	55	57	60	63	64	66	68	68	69	70	70	70	69	68	65	62	59	57	53	52	52	53
B	250	38	44	55	59	61	62	66	68	69	71	72	73	73	73	73	73	73	72	69	66	62	59	55	55	54
B	260	33	39	50	54	56	59	61	63	64	66	67	69	69	69	69	69	69	68	66	63	58	54	49	47	45
B	270	32	40	49	53	56	58	60	62	64	65	66	67	68	68	68	68	67	66	65	64	61	49	45	43	40
B	280	33	41	47	52	55	59	59	61	63	66	67	68	68	68	67	67	67	66	63	61	54	48	42	38	34
B	290	35	41	46	52	55	56	57	60	63	64	64	67	68	69	67	65	65	65	63	58	50	43	37	36	35
C	300	38	43	47	51	55	56	57	57	61	62	66	66	66	66	65	65	66	63	64	54	43	37	33	43	46
C	310	40	43	46	49	51	53	50	51	58	59	59	60	58	56	56	53	51	52	52	40	36	35	34	41	46
C	320	40	42	43	45	47	47	48	43	49	48	47	47	47	46	46	43	42	44	36	30	33	34	34	37	42
D	330	35	37	37	38	38	38	38	38	38	38	37	36	36	36	36	30	35	32	27	21	23	28	30	34	38
D	340	30	32	32	33	31	31	30	29	30	34	29	26	26	26	28	24	28	24	23	20	20	24	26	30	31
D	350	28	28	30	30	28	27	26	22	22	21	20	20	20	20	22	24	21	25	23	22	20	20	22	24	26	26
C	360	26	27	28	27	26	25	21	20	19	17	16	16	16	17	18	19	22	22	21	20	20	22	23	23	23

PROBABILITY WITH 3000 FT WINDS CALM IS 28 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.13	1000-1500EST	.63
1000-1200EST	.21	1000-1600EST	.78
1000-1300EST	31	1000-1700EST	.85
1000-1400EST	44	1000-1800EST	.91

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON AUG 31. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 35 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

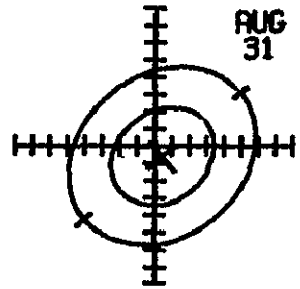


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
B	010	27	28	28	27	25	24	22	20	19	18	15	16	16	16	17	17	18	17	17	17	17	18	19	18	17
B	020	28	28	28	27	26	25	23	21	19	18	16	14	13	13	13	13	14	15	15	15	15	14	13	13	12
B	030	30	30	29	28	27	26	24	23	21	20	18	16	15	14	14	14	14	14	13	13	12	12	11	11	11
B	040	33	31	30	29	27	27	26	25	23	22	22	21	20	20	19	19	18	17	16	16	15	14	14	14	14
A	050	33	32	29	27	25	25	24	23	24	25	26	27	26	25	24	23	22	21	20	19	17	15	15	15	15
B	060	29	27	24	21	20	20	20	20	21	22	22	24	23	23	22	22	21	19	18	16	14	13	12	11	11
A	070	26	24	21	18	17	17	17	17	17	18	18	19	20	20	20	19	18	16	14	14	12	11	10	**	**
A	080	21	19	16	14	12	12	12	11	12	12	12	13	14	14	15	14	14	13	12	**	**	**	**	**	**
A	090	18	16	14	12	10	**	**	**	**	**	**	**	10	11	12	12	12	11	10	**	**	**	**	**	**
A	100	16	15	12	11	**	**	**	**	**	**	**	**	**	**	**	**	10	10	**	**	**	**	**	**	**
A	110	17	16	14	13	12	11	**	**	**	**	**	**	**	**	**	**	**	**	10	11	11	11	10	**	**
A	120	19	18	17	16	15	15	13	13	12	12	12	12	12	12	13	13	13	14	14	15	15	14	13	13	12
A	130	21	20	19	19	18	17	17	17	17	17	17	17	18	18	19	20	21	21	22	23	23	23	22	19	18
A	140	19	19	19	19	18	17	18	18	18	18	18	18	17	18	19	20	22	23	24	26	27	27	27	26	26
A	150	20	20	20	20	19	20	21	21	22	22	22	23	24	25	27	29	30	31	32	33	34	35	37	39	40
A	160	18	18	18	19	19	20	22	23	23	25	25	26	28	29	29	30	31	32	33	34	35	36	37	39	40
B	170	20	21	23	24	26	27	28	30	31	33	34	35	36	36	37	39	41	43	45	47	48	48	50	51	51
A	180	23	30	31	32	35	36	37	39	40	41	43	44	46	48	49	53	56	59	61	61	60	59	55	55	56
A	190	24	32	34	39	41	41	44	45	47	48	50	52	55	57	60	60	61	61	61	61	60	60	58	56	56
A	200	25	34	38	41	44	47	50	52	54	56	58	59	60	62	63	63	62	62	62	61	60	59	58	55	56
B	210	28	35	43	46	50	52	55	58	61	63	65	66	67	67	67	67	66	65	62	59	59	58	56	58	60
B	220	30	37	45	50	52	52	59	62	64	65	66	67	70	70	69	68	65	61	57	55	56	55	55	56	62
B	230	27	35	44	48	50	53	57	59	61	63	64	65	66	66	65	64	62	58	54	53	51	50	51	51	53
B	240	29	36	45	50	52	55	58	59	61	63	63	64	65	65	65	64	63	60	57	54	52	48	47	47	48
B	250	35	41	52	56	58	59	63	65	66	68	69	70	70	70	70	70	70	69	66	63	59	56	52	52	51
C	260	33	39	50	54	56	59	61	63	64	66	67	69	69	69	69	69	69	68	66	63	58	54	49	47	45
C	270	34	42	51	55	58	60	62	64	66	67	68	69	70	70	70	70	69	68	67	66	63	51	47	45	42
C	280	33	41	47	52	55	59	59	61	63	66	67	68	68	68	67	67	67	66	63	61	54	48	42	38	34
C	290	34	40	45	51	54	55	56	59	62	63	63	66	67	68	66	64	64	64	62	57	49	42	36	35	34
C	300	35	40	44	48	52	53	54	54	58	59	63	63	63	63	62	62	63	60	61	51	40	34	30	40	43
C	310	36	39	42	45	47	49	46	47	54	55	55	56	54	52	52	49	47	48	48	36	32	31	30	37	42
C	320	37	39	40	42	44	44	45	40	46	45	44	44	44	43	43	40	39	41	33	27	30	31	31	34	39
C	330	37	39	39	40	40	40	40	40	40	40	39	38	38	38	38	32	37	34	29	23	25	30	32	36	40
C	340	34	36	36	37	35	35	34	33	34	38	33	30	30	30	32	28	32	28	27	24	24	28	30	34	35
C	350	32	32	34	34	32	31	30	26	26	25	24	24	24	26	28	25	29	27	26	24	24	26	28	30	30
C	360	29	30	31	30	29	28	24	23	22	20	19	19	19	20	21	22	25	25	24	23	23	25	26	26	26

(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)

PROBABILITY WITH 3000 FT WINDS CALM IS 28 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.16	1000-1500EST	.65
1000-1200EST	.21	1000-1600EST	.75
1000-1300EST	.32	1000-1700EST	.82
1000-1400EST	.44	1000-1800EST	.86

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON SEP 05. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 29 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

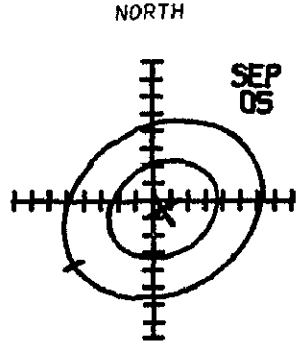


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

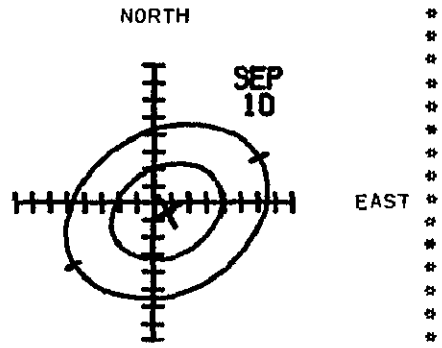
	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
C	010	23	24	24	23	21	20	18	16	15	14	11	12	12	12	13	13	14	13	13	13	13	14	15	14	13
C	020	24	24	24	23	22	21	19	17	15	14	12	10	**	**	**	**	10	11	11	11	11	10	**	**	**
B	030	28	28	27	26	25	24	22	21	19	18	16	14	13	12	12	12	12	12	11	11	10	10	**	**	**
B	040	30	28	27	26	24	24	23	22	20	19	19	18	17	17	16	16	15	14	13	13	12	11	11	11	11
B	050	28	27	24	22	20	20	19	18	19	20	21	22	21	20	19	18	17	16	15	14	12	10	10	10	10
A	060	25	23	20	17	16	16	16	16	17	18	18	20	19	19	18	18	17	15	14	12	10	**	**	**	**
A	070	22	20	17	14	13	13	13	13	13	14	14	15	16	16	16	15	14	12	10	10	**	**	**	**	**
A	080	18	16	13	11	**	**	**	**	**	**	**	10	11	11	12	11	11	10	**	**	**	**	**	**	**
A	090	15	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	100	13	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	110	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	120	14	13	12	11	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	10	10	**	**	**
A	130	17	16	15	15	14	13	13	13	13	13	13	13	14	14	15	16	17	17	18	19	19	19	18	15	14
B	140	17	17	17	17	16	15	16	16	16	16	16	15	16	17	18	20	21	22	24	25	25	25	24	24	
B	150	21	21	21	21	20	21	22	22	23	23	23	24	25	26	28	30	31	32	33	34	35	36	38	40	41
A	160	22	22	22	23	23	24	26	27	27	29	29	30	32	33	33	34	35	36	37	38	39	40	41	43	44
B	170	26	27	29	30	32	33	34	36	37	39	40	41	42	42	43	45	47	49	51	53	54	54	56	57	57
B	180	30	37	38	39	42	43	44	46	47	48	50	51	53	55	56	60	63	66	68	68	67	66	62	62	63
A	190	31	39	41	46	48	48	51	52	54	55	57	59	62	64	67	67	68	68	68	68	67	67	65	63	63
A	200	30	39	43	46	49	52	55	57	59	61	63	64	65	67	68	68	67	67	67	66	65	64	63	60	61
B	210	31	38	46	49	53	55	58	61	64	66	68	69	70	70	70	70	69	68	65	62	62	61	59	61	63
B	220	32	39	47	52	54	54	61	64	66	67	68	69	72	72	71	70	67	63	59	57	58	57	57	58	64
B	230	27	35	44	48	50	53	57	59	61	63	64	65	66	66	65	64	62	58	54	53	51	50	51	51	53
B	240	27	34	43	48	50	53	56	57	59	61	61	62	63	63	63	62	61	58	55	52	50	46	45	45	46
B	250	30	36	47	51	53	54	58	60	61	63	64	65	65	65	65	65	65	64	61	58	54	51	47	47	46
B	260	28	34	45	49	51	54	56	58	59	61	62	64	64	64	64	64	64	63	61	58	53	49	44	42	40
B	270	30	38	47	51	54	56	58	60	62	63	64	65	66	66	66	66	65	64	63	62	59	47	43	41	38
C	280	31	39	45	50	53	57	57	59	61	64	65	66	66	66	65	65	65	64	61	59	52	46	40	36	32
C	290	33	39	44	50	53	54	55	58	61	62	62	65	66	67	65	63	63	63	61	56	48	41	35	34	33
C	300	34	39	43	47	51	52	53	53	57	58	62	62	62	62	61	61	62	59	60	50	39	33	29	39	42
C	310	32	35	38	41	43	45	42	43	50	51	51	52	50	48	48	45	43	44	44	32	28	27	26	33	38
C	320	32	34	35	37	39	39	40	35	41	40	39	39	39	38	38	35	34	36	28	22	25	26	26	29	34
C	330	32	34	34	35	35	35	35	35	35	35	34	33	33	33	33	27	32	29	24	18	20	25	27	31	35
C	340	29	31	31	32	30	30	29	28	29	33	28	25	25	25	27	23	27	23	22	19	19	23	25	29	30
C	350	28	28	30	30	28	27	26	22	22	21	20	20	20	22	24	21	25	23	22	20	20	22	24	26	26
C	360	25	26	27	26	25	24	20	19	18	16	15	15	15	16	17	18	21	21	20	19	19	21	22	22	22

PROBABILITY WITH 3000 FT WINDS CALM IS 26 PERCENT TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.16	1000-1500EST	.61
1000-1200EST	.21	1000-1600EST	.74
1000-1300EST	.33	1000-1700EST	.85
1000-1400EST	.41	1000-1800EST	.89

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON SEP 10. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 31 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.



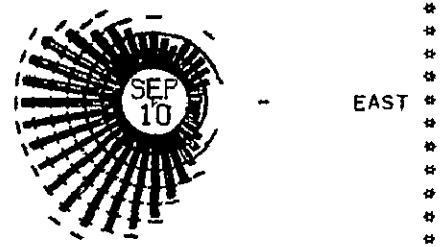


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
C	010	17	18	18	17	15	14	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	020	19	19	19	18	17	16	14	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	030	21	21	20	19	18	17	15	14	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	040	21	19	18	17	15	15	14	13	11	10	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	050	21	20	17	15	13	13	12	11	12	13	14	15	14	13	12	11	10	**	**	**	**	**	**	**	**
A	060	19	17	14	11	10	10	10	10	11	12	12	14	13	13	12	12	11	**	**	**	**	**	**	**	**
A	070	18	16	13	10	**	**	**	**	**	10	10	11	12	12	12	11	10	**	**	**	**	**	**	**	**
A	080	16	14	11	**	**	**	**	**	**	**	**	**	**	**	10	**	**	**	**	**	**	**	**	**	**
A	090	15	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	100	14	13	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	110	13	12	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	120	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	130	14	13	12	12	11	10	10	10	10	10	10	10	11	11	12	13	14	14	15	16	16	16	15	12	11
B	140	14	14	14	14	13	12	13	13	13	13	13	13	12	13	14	15	17	18	19	21	22	22	22	21	21
B	150	20	20	20	20	19	20	21	21	22	22	22	23	24	25	27	29	30	31	32	33	34	35	37	39	40
A	160	24	24	24	25	25	26	28	29	29	31	31	32	34	35	35	36	37	38	39	40	41	42	43	45	46
A	170	29	30	32	33	35	36	37	39	40	42	43	44	45	45	46	48	50	52	54	56	57	57	59	60	60
B	180	33	40	41	42	45	46	47	49	50	51	53	54	56	58	59	63	66	69	71	71	70	69	65	65	66
B	190	33	41	43	48	50	50	53	54	56	57	59	61	64	66	69	69	70	70	70	70	69	69	67	65	65
B	200	33	42	46	49	52	55	58	60	62	64	66	67	68	70	71	71	70	70	70	69	68	67	66	63	64
B	210	34	41	49	52	56	58	61	64	67	69	71	72	73	73	73	73	72	71	68	65	65	64	62	64	66
B	220	34	41	49	54	56	56	63	66	68	69	70	71	74	74	73	72	69	65	61	59	60	59	59	60	66
B	230	29	37	46	50	52	55	59	61	63	65	66	67	68	68	67	66	64	60	56	55	53	52	53	53	55
B	240	28	35	44	49	51	54	57	58	60	62	62	63	64	64	64	63	62	59	56	53	51	47	46	46	47
B	250	27	33	44	48	50	51	55	57	58	60	61	62	62	62	62	62	62	61	58	55	51	48	44	44	43
C	260	21	27	38	42	44	47	49	51	52	54	55	57	57	57	57	57	57	56	54	51	46	42	37	35	33
C	270	22	30	39	43	46	48	50	52	54	55	56	57	58	58	58	58	57	56	55	54	51	39	35	33	30
C	280	23	31	37	42	45	49	49	51	53	56	57	58	58	58	57	57	57	56	53	51	44	38	32	28	24
C	290	27	33	38	44	47	48	49	52	55	56	56	59	60	61	59	57	57	57	55	50	42	35	29	28	27
C	300	29	34	38	42	46	47	48	48	52	53	57	57	57	57	56	56	57	54	55	45	34	28	24	34	37
C	310	25	28	31	34	36	38	35	36	43	44	44	45	43	41	41	38	36	37	37	25	21	20	19	26	31
C	320	23	25	26	28	30	30	31	26	32	31	30	30	30	29	29	26	25	27	19	13	16	17	17	20	25
C	330	20	22	22	23	23	23	23	23	23	23	22	21	21	21	21	15	20	17	12	**	**	13	15	19	23
D	340	19	21	21	22	20	20	19	18	19	23	18	15	15	15	17	13	17	13	12	**	**	13	15	19	20
C	350	20	20	20	22	22	20	19	18	14	14	13	12	12	12	14	16	13	17	15	14	12	12	14	16	18	18
C	360	17	18	19	18	17	16	12	11	10	**	**	**	**	**	**	10	13	13	12	11	11	13	14	14	14

PROBABILITY WITH 3000 FT WINDS CALM IS 22 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.11	1000-1500EST	.43
1000-1200EST	.13	1000-1600EST	.65
1000-1300EST	.22	1000-1700EST	.78
1000-1400EST	.28	1000-1800EST	.85

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON SEP 15. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 24 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

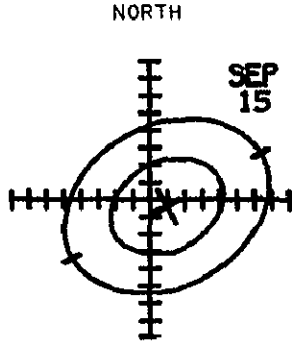


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
C	010	14	15	15	14	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	020	18	18	18	17	16	15	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	030	18	18	17	16	15	14	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	040	18	16	15	14	12	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	050	18	17	14	12	10	10	**	**	**	10	11	12	11	10	**	**	**	**	**	**	**	**	**	**	**
A	060	17	15	12	**	**	**	**	**	**	10	10	12	11	11	10	10	**	**	**	**	**	**	**	**	**
A	070	18	16	13	10	**	**	**	**	**	10	10	11	12	12	12	11	10	**	**	**	**	**	**	**	**
A	080	18	16	13	11	**	**	**	**	**	**	**	10	11	11	12	11	11	10	**	**	**	**	**	**	**
A	090	17	15	13	11	**	**	**	**	**	**	**	**	**	10	11	11	11	10	**	**	**	**	**	**	**
A	100	16	15	12	11	**	**	**	**	**	**	**	**	**	**	**	**	10	10	**	**	**	**	**	**	**
A	110	15	14	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	120	13	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	130	13	12	11	11	10	**	**	**	**	**	**	**	10	10	11	12	13	13	14	15	15	15	14	11	10
B	140	13	13	13	13	12	11	12	12	12	12	12	12	11	12	13	14	16	17	18	20	21	21	21	20	20
C	150	20	20	20	20	19	20	21	21	22	22	22	23	24	25	27	29	30	31	32	33	34	35	37	39	40
B	160	26	26	26	27	27	28	30	31	31	33	33	34	36	37	37	38	39	40	41	42	43	44	45	47	48
B	170	32	33	35	36	38	39	40	42	43	45	46	47	48	48	49	51	53	55	57	59	60	60	62	63	63
B	180	34	41	42	43	46	47	48	50	51	52	54	55	57	59	60	64	67	70	72	72	71	70	66	66	67
B	190	32	40	42	47	49	49	52	53	55	56	58	60	63	65	68	68	69	69	69	69	68	68	66	64	64
B	200	31	40	44	47	50	53	56	58	60	62	64	65	66	68	69	69	68	68	68	67	66	65	64	61	62
B	210	31	38	46	49	53	55	58	61	64	66	68	69	70	70	70	70	69	68	65	62	62	61	59	61	63
B	220	31	38	46	51	53	53	60	63	65	66	67	68	71	71	70	69	66	62	58	56	57	56	56	57	63
B	230	28	36	45	49	51	54	58	60	62	64	65	66	67	67	66	65	63	59	55	54	52	51	52	52	54
B	240	26	33	42	47	49	52	55	56	58	60	60	61	62	62	62	61	60	57	54	51	49	45	44	44	45
B	250	23	29	40	44	46	47	51	53	54	56	57	58	58	58	58	58	58	57	54	51	47	44	40	40	39
C	260	12	18	29	33	35	38	40	42	43	45	46	48	48	48	48	48	48	47	45	42	37	33	28	26	24
B	270	10	18	27	31	34	36	38	40	42	43	44	45	46	46	46	46	45	44	43	42	39	27	23	21	18
C	280	**	16	22	27	30	34	34	36	38	41	42	43	43	43	42	42	42	41	38	36	29	23	17	13	**
C	290	11	17	22	28	31	32	33	36	39	40	40	43	44	45	43	41	41	41	39	34	26	19	13	12	11
D	300	13	18	22	26	30	31	32	32	36	37	41	41	41	41	40	40	41	38	39	29	18	12	**	18	21
D	310	11	14	17	20	22	24	21	22	29	30	30	31	29	27	27	24	22	23	23	11	**	**	**	12	17
D	320	11	13	14	16	18	18	19	14	20	19	18	18	18	17	17	14	13	15	**	**	**	**	**	**	13
D	330	10	12	12	13	13	13	13	13	13	13	12	11	11	11	11	**	10	**	**	**	**	**	**	**	13
D	340	14	16	16	17	15	15	14	13	14	18	13	10	10	10	12	**	12	**	**	**	**	**	10	14	15
D	350	18	18	20	20	18	17	16	12	12	11	10	10	10	12	14	11	15	13	12	10	10	12	14	16	16
C	360	14	15	16	15	14	13	**	**	**	**	**	**	**	**	**	**	10	10	**	**	**	10	11	11	11

PROBABILITY WITH 3000 FT WINDS CALM IS 19 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100FST	.09	1000-1500EST	.44
1000-1200EST	.11	1000-1600EST	.64
1000-1300EST	.22	1000-1700EST	.78
1000-1400EST	.27	1000-1800EST	.84

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON SEP 20. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 23 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

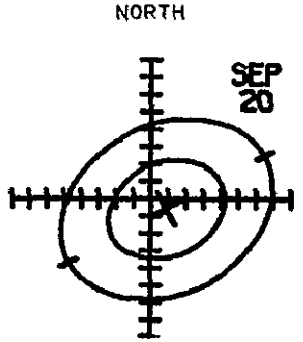


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
C	010	13	14	14	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	020	18	18	18	17	16	15	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	030	18	18	17	16	15	14	12	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	040	18	16	15	14	12	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	050	20	19	16	14	12	12	11	10	11	12	13	14	13	12	11	10	**	**	**	**	**	**	**	**	**
A	060	20	18	15	12	11	11	11	11	12	13	13	15	14	14	13	13	12	10	**	**	**	**	**	**	**
A	070	20	18	15	12	11	11	11	11	11	12	12	13	14	14	14	13	12	10	**	**	**	**	**	**	**
A	080	20	18	15	13	11	11	11	10	11	11	11	12	13	13	14	13	13	12	11	**	**	**	**	**	**
A	090	19	17	15	13	11	10	**	**	10	10	10	10	11	12	13	13	13	12	11	10	**	**	**	**	**
A	100	18	17	14	13	11	10	**	**	**	**	**	**	**	10	10	11	12	12	11	10	10	10	**	**	**
A	110	17	16	14	13	12	11	**	**	**	**	**	**	**	**	**	**	**	**	10	11	11	11	10	**	**
A	120	15	14	13	12	11	11	**	**	**	**	**	**	**	**	**	**	**	10	10	11	11	10	**	**	**
A	130	16	15	14	14	13	12	12	12	12	12	12	12	13	13	14	15	16	16	17	18	18	18	17	14	13
B	140	16	16	16	16	15	14	15	15	15	15	15	15	14	15	16	17	19	20	21	23	24	24	24	23	23
B	150	22	22	22	22	21	22	23	23	24	24	24	25	26	27	29	31	32	33	34	35	36	37	39	41	42
B	160	29	29	29	30	30	31	33	34	34	36	36	37	39	40	40	41	42	43	44	45	46	47	48	50	51
A	170	33	34	36	37	39	40	41	43	44	46	47	48	49	49	50	52	54	56	58	60	61	61	63	64	64
A	180	30	37	38	39	42	43	44	46	47	48	50	51	53	55	56	60	63	66	68	68	67	66	62	62	63
A	190	26	34	36	41	43	43	46	47	49	50	52	54	57	59	62	62	63	63	63	63	62	62	60	58	58
A	200	23	32	36	39	42	45	48	50	52	54	56	57	58	60	61	61	60	60	60	59	58	57	56	53	54
B	210	19	26	34	37	41	43	46	49	52	54	56	57	58	58	58	58	57	56	53	50	50	49	47	49	51
B	220	17	24	32	37	39	39	46	49	51	52	53	54	57	57	56	55	52	48	44	42	43	42	42	43	49
B	230	15	23	32	36	38	41	45	47	49	51	52	53	54	54	53	52	50	46	42	41	39	38	39	39	41
B	240	14	21	30	35	37	40	43	44	46	48	48	49	50	50	50	49	48	45	42	39	37	33	32	32	33
B	250	12	18	29	33	35	36	40	42	43	45	46	47	47	47	47	47	47	46	43	40	36	33	29	29	28
C	260	**	**	19	23	25	28	30	32	33	35	36	38	38	38	38	38	38	37	35	32	27	23	18	16	14
C	270	**	**	14	18	21	23	25	27	29	30	31	32	33	33	33	33	32	31	30	29	26	14	10	**	**
C	280	**	**	**	13	16	20	20	22	24	27	28	29	29	29	28	28	28	27	24	22	15	**	**	**	**
C	290	**	**	**	**	13	16	17	18	21	24	25	25	28	29	30	28	26	26	26	24	19	11	**	**	**
C	300	**	**	**	**	10	14	15	16	16	20	21	25	25	25	25	24	24	25	22	23	13	**	**	**	**
C	310	**	**	**	**	**	10	12	**	10	17	18	18	19	17	15	15	12	10	11	11	**	**	**	**	**
D	320	**	**	**	**	**	10	10	11	**	12	11	10	10	10	**	**	**	**	**	**	**	**	**	**	**
D	330	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
D	340	12	14	14	15	13	13	12	11	12	16	11	**	**	**	**	10	**	**	**	**	**	**	**	12	13
C	350	18	18	20	20	18	17	16	12	12	11	10	10	10	12	14	11	15	13	12	10	10	12	14	16	16
C	360	13	14	15	14	13	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	10	10	10

(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)

PROBABILITY WITH 3000 FT WINDS CALM IS 15 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	.07	1000-1500EST	.51
1000-1200EST	.15	1000-1600EST	.68
1000-1300EST	.24	1000-1700EST	.73
1000-1400EST	.32	1000-1800EST	.78

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON SEP 25. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 21 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.

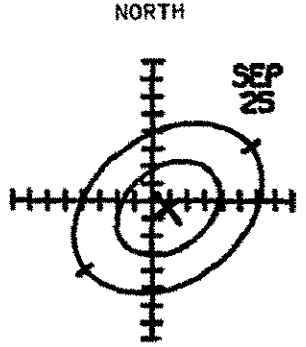


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

PERCENT PROBABILITY OF ONE OR MORE AFTERNOON(1000-2200EST) THUNDERSTORMS AT OR IN IMMEDIATE VICINITY OF CAPE KENNEDY AS A FUNCTION OF THE 3000 FT 1200GMT WIND SPEED AND DIRECTION(DDD). LETTER PRECEDING DIRECTION IS A PROBABILITY CONFIDENCE FACTOR BASED ON NUMBER OF OBSERVATIONS WHERE -A- REPRESENTS MAXIMUM AND -D- REPRESENTS MINIMUM CONFIDENCE. SEE TEXT FOR FURTHER EXPLANATION.

1200GMT 3000 FT WIND SPEED(KTS)

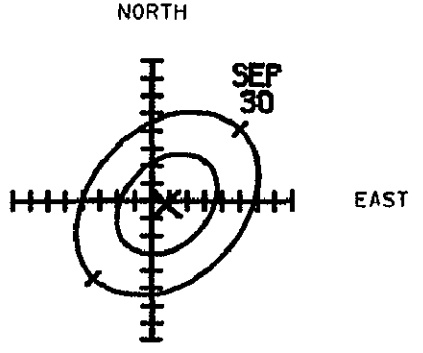
	DDD	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	(NOTE...DOUBLE ASTERISK INDICATES PROBABILITY LESS THAN 10 PERCENT.)																									
B	010	10	11	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	020	16	16	16	15	14	13	11	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	030	17	17	16	15	14	13	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
B	040	18	16	15	14	12	12	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
A	050	21	20	17	15	13	13	12	11	12	13	14	15	14	13	12	11	10	**	**	**	**	**	**	**	**
A	060	20	18	15	12	11	11	11	11	12	13	13	15	14	14	13	13	12	10	**	**	**	**	**	**	**
A	070	20	18	15	12	11	11	11	11	11	12	12	13	14	14	14	13	12	10	**	**	**	**	**	**	**
A	080	20	18	15	13	11	11	11	10	11	11	11	12	13	13	14	13	13	12	11	**	**	**	**	**	**
A	090	20	18	16	14	12	11	10	10	11	11	11	11	12	13	14	14	14	13	12	11	10	**	**	**	**
A	100	19	18	15	14	12	11	10	10	10	10	10	10	10	11	11	12	13	13	12	11	11	11	10	10	**
A	110	17	16	14	13	12	11	**	**	**	**	**	**	**	**	**	**	**	**	10	11	11	11	10	**	**
A	120	17	16	15	14	13	13	11	11	10	10	10	10	10	10	11	11	11	12	12	13	13	12	11	11	10
B	130	19	18	17	17	16	15	15	15	15	15	15	15	16	16	17	18	19	19	20	21	21	21	20	17	16
B	140	20	20	20	20	19	18	19	19	19	19	19	19	18	19	20	21	23	24	25	27	28	28	28	27	27
B	150	22	22	22	22	21	22	23	23	24	24	24	25	26	27	29	31	32	33	34	35	36	37	39	41	42
B	160	27	27	27	28	28	29	31	32	32	34	34	35	37	38	38	39	40	41	42	43	44	45	46	48	49
A	170	29	30	32	33	35	36	37	39	40	42	43	44	45	45	46	48	50	52	54	56	57	57	59	60	60
A	180	23	30	31	32	35	36	37	39	40	41	43	44	46	48	49	53	56	59	61	61	60	59	55	55	56
A	190	17	25	27	32	34	34	37	38	40	41	43	45	48	50	53	53	54	54	54	54	53	53	51	49	49
A	200	12	21	25	28	31	34	37	39	41	43	45	46	47	49	50	50	49	49	49	48	47	46	45	42	43
B	210	**	13	21	24	28	30	33	36	39	41	43	44	45	45	45	45	44	43	40	37	37	36	34	36	38
B	220	**	**	17	22	24	24	31	34	36	37	38	39	42	42	41	40	37	33	29	27	28	27	27	28	34
C	230	**	**	17	21	23	26	30	32	34	36	37	38	39	39	38	37	35	31	27	26	24	23	24	24	26
C	240	**	**	14	19	21	24	27	28	30	32	32	33	34	34	34	33	32	29	26	23	21	17	16	16	17
C	250	**	**	14	18	20	21	25	27	28	30	31	32	32	32	32	32	32	31	28	25	21	18	14	14	13
C	260	**	**	**	12	14	17	19	21	22	24	25	27	27	27	27	27	27	26	24	21	16	12	**	**	**
C	270	**	**	**	**	11	13	15	17	19	20	21	22	23	23	23	23	22	21	20	19	16	**	**	**	**
C	280	**	**	**	**	**	10	10	12	14	17	18	19	19	19	18	18	18	17	14	12	**	**	**	**	**
C	290	**	**	**	**	**	**	**	11	14	15	15	18	19	20	18	16	16	16	14	**	**	**	**	**	**
C	300	**	**	**	**	**	**	**	**	12	13	17	17	17	17	16	16	17	14	15	**	**	**	**	**	**
C	310	**	**	**	**	**	**	**	**	12	13	13	14	12	10	10	**	**	**	**	**	**	**	**	**	**
C	320	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	330	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	340	**	10	10	11	**	**	**	**	**	12	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C	350	13	13	15	15	13	12	11	**	**	**	**	**	**	**	**	**	10	**	**	**	**	**	**	11	11
B	360	**	10	11	10	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**

PROBABILITY WITH 3000 FT WINDS CALM IS 12 PERCENT. TO ESTIMATE THE PROBABILITIES FOR PERIODS OTHER THAN 1000-2200EST, MULTIPLY TABULAR VALUES BY FOLLOWING FACTORS-

PERIOD	MULTIPLICATION FACTOR	PERIOD	MULTIPLICATION FACTOR
1000-1100EST	13	1000-1500EST	59
1000-1200EST	.13	1000-1600EST	.66
1000-1300EST	.31	1000-1700EST	.69
1000-1400EST	.41	1000-1800EST	.75

THESE DATA VALID FOR 5-DAY PERIOD CENTERED ON SEP 30. UNCONDITIONAL PROBABILITY OF ONE OR MORE THUNDERSTORMS ON THIS DATE IS 16 PERCENT.

ELLIPSES BELOW SHOW THE DISTRIBUTION OF THE 1200GMT 3000 FT WINDS ASSUMING A BIVARIATE NORMAL DISTRIBUTION OF THE U AND V COMPONENTS. INNER AND OUTER ELLIPSES ENCLOSE 50 AND 90 PERCENT OF THE CASES. EACH SCALE MARK ON AXES IS WORTH FOUR KNOTS.



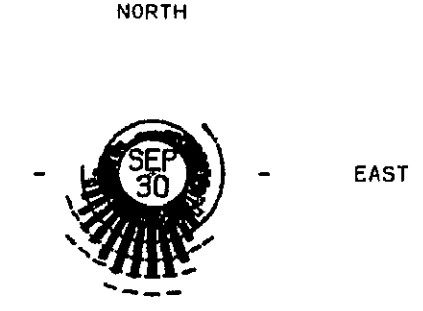


DIAGRAM ABOVE SHOWS THE AFTERNOON THUNDERSTORM PROBABILITY ON THIS DATE FOR EACH 1200GMT 3000 FT WIND DIRECTION, REGARDLESS OF SPEED. EACH CONCENTRIC ARC IS WORTH 10 PERCENT.

SEE TEXT FOR FURTHER EXPLANATION OF THESE DIAGRAMS.

* U S GOVERNMENT PRINTING OFFICE 1970 382-254/211