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REPORT**

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**SURFACE CLIMATOLOGICAL INFORMATION -
TWENTY SELECTED STATIONS FOR
SPACE SHUTTLE STUDIES**

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Prepared for

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16. Abstract <p>Space Shuttle studies require surface climatological information for advanced planning in the design, operation, and site selection areas. This short study presents selected climatological summaries for twenty United States locations - two of which are in Alaska. A short narrative precedes the tabular summaries. Monthly and annual temperature-precipitation summaries are presented on one page. The monthly and annual summaries of specified weather conditions are also shown. A few ceiling/visibility combinations from near minimum to good landing conditions are included in the specified weather conditions. The last summaries are wind rose tabulations.</p> <p>This report was prepared to provide background information for use in tradeoff studies on the NASA Space Shuttle operational and abort landing requirements relative to atmospheric conditions at several selected locations. The minimum runway length for each station included in this study is approximately 10,000 ft.</p>			
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PREFACE

These climatologies, prepared in support of the Space Shuttle Program, are directed primarily towards "flying weather" descriptors. The locations were selected from a list of candidate launch, landing, and alternate landing sites. This does not imply that these locations are being considered by the NASA as Space Shuttle launch sites. An earlier publication, NASA CR-61319, entitled, "Surface Climatological Information for Twelve Selected Stations for Re-Entry Vehicles," gave similar data for:

Edwards AFB, California
Langley AFB, Virginia
Patrick AFB, Florida
Moron, Argentina
Moron De LaFrontera, Spain
Ambala, India
Dhahran, Saudi Arabia
Bloemfontein, South Africa
Reggan, Algeria
Alice Springs, Australia
Honolulu, Hawaii.

While only a few ceiling/visibility combinations from near minimum to good landing conditions are listed, almost any combination from zero ceiling/zero visibility to 20,000 ft ceiling/10 mi visibility is available upon request to Aerospace Environment Division, Aero-Astroynamics Laboratory, Marshall Space Flight Center, Alabama 35812.

S. Clark Brown
Aerospace Environment Division
Aero-Astroynamics Laboratory
NASA-Marshall Space Flight Center

I. Foreword

This study is a continuation of NASA CR-61319 February 1970. Twenty additional sites were selected for this second study. The only figure included is a map showing the station locations. These locations are:

- Alaska - Eielson A.F.B., Fairbanks; Elmendorf A.F.B., Anchorage
- California - Castle A.F.B., Merced; Vandenberg A.F.B., Santa Maria
- Florida - McCoy A.F.B., Orlando
- Mississippi - Columbus A.F.B., Columbus
- Missouri - Whiteman A.F.B., Knob Noster
- North Carolina - Cherry Point M.C.A.S., Havelock; Seymour-Johnson A.F.B., Goldsboro
- New Mexico - Holloman A.F.B., Alamogordo
- New Jersey - McGuire A.F.B., Wrightstown
- South Carolina - Shaw A.F.B., Sumter
- South Dakota - Ellsworth A.F.B., Rapid City
- Texas - Bergstrom A.F.B., Austin; Biggs A.F.B., El Paso; Carswell A.F.B., Ft. Worth; Dyess A.F.B., Abilene; Ellington A.F.B., Houston; Kelly A.F.B., San Antonio; Sheppard A.F.B., Wichita Falls

II. Data

A. Source

The data used for this study have been obtained from the archives of the National Climatic Center at Asheville, N. C.

B. Format

The information presented are those of:

1. Narrative summary
2. Temperature, precipitation, and wind tabulation
3. Tables of selected present weather categories
4. Wind rose tabulations

C. Presentation

1. A short narrative description of the climatology precedes the tabular summaries. The period of record is included in the narrative.

2. Temperatures are given in degrees Fahrenheit, precipitation in inches.

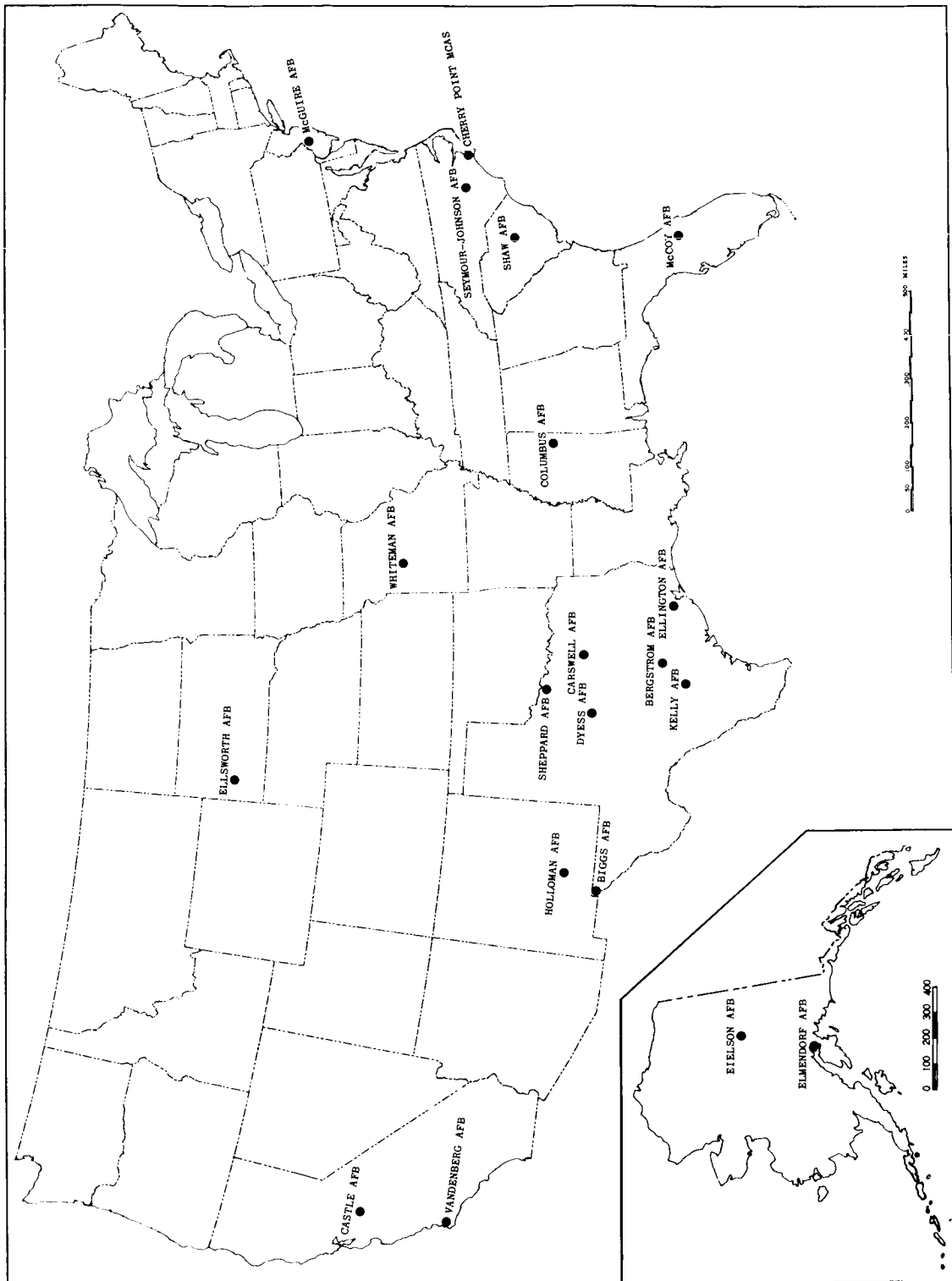
3. In the percentage frequencies of occurrence of specified weather conditions, the following elements are summarized where data were available:

- a. Number of observations
- b. Ceilings less than 200 feet and/or visibilities less than $\frac{1}{2}$ statute mile
- c. Ceilings less than 2,000 feet and/or visibilities less than 3 statute miles
- d. Ceilings less than 4,000 feet and/or visibilities less than 6 statute miles
- e. Total cloud cover equal to or less than 3/10
- f. Thunder, with or without precipitation
- g. Rain and/or drizzle
- h. Freezing rain and/or freezing drizzle

- i. Snow and/or sleet
- j. Hail
- k. Total occurrences of precipitation
- l. Fog
- m. Smoke and/or haze
- n. Blowing snow
- o. Dust (blowing and/or suspended)
- p. Total occurrences of obstructions to vision.

4. In the wind presentations, wind directions to sixteen points of the compass and calm are shown arrayed against the selected categories of wind speeds. Marginal distributions by wind direction and by wind speed categories are included.

STATION LOCATIONS



CDNS 2.3.4

EIELSON AFB FAIRBANKS, ALASKA (Lat. 64°41'N, Long. 147°05'W, Elev. 558 ft.)

Eielson AFB is located on the extreme edge of the Tanana Valley of Interior Alaska, which is open and slopes downward to the west. The foothills of the mountains are 15 miles to the east of the airfield, Fairbanks is 16 miles northwest and the Tanana river four miles southwest. This area is characterized by mixed vegetation of forest, brush, scrub and tundra; permanently frozen subsoil; and large rivers - the Yukon, Tanana and Kuskokwim. Landforms include wide, discontinuous plains along the main streams as well as hills, plateaus and mountains of low to moderate elevations.

This valley has a continental climate since it is well sheltered from maritime influences. Winter lasts from September through May and summer from June through August, with spring and fall being periods of rapid transition.

In winter, arctic or very cold continental dry air masses predominate with a great number of clear days. Temperatures generally average about -10° F to -20° F, interrupted normally by short periods of either relatively warm or extremely cold spells. During all seasons, westerly through southwesterly air flow will cause extensive precipitation and cloudiness. When winter cloudiness occurs it is characteristically the low stratus type. Flying beneath the low clouds, at altitudes of 1,000 to 2,000 feet, occasionally may be hazardous due to poor visibility associated with snow showers. Amounts of cloudiness are low particularly during the period February through April. The best flying conditions are

EIELSON AFB (Cont'd.)

during March and April when the restrictions due to fog and low clouds are at a minimum.

Ice fog will become a restricting factor with near calm conditions and temperatures below -20° F. It is quite persistent in December, January and February. Rime ice is always a possibility in this area when temperatures are below freezing.

In the summer, flying is best during the early morning hours before the on-set of convective activity which may produce showers and thunder-showers with cumulonimbus clouds extending to 25,000 - 30,000 feet.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from November 1944-May 1945 and October 1946-October 1968; with the exception of cloud cover for which data are not available prior to 1946.

EIELSON AFB FAIRBANKS, ALASKA

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	-2.6	6.4	22.2	38.7	56.6	68.1	69.9	65.3	53.9	32.3	10.1	-3.8	34.8
Mean	-11.3	-4.6	8.5	28.2	46.3	57.9	60.3	55.6	44.5	24.4	2.1	-11.5	25.0
Minimum	-19.7	-15.5	-5.3	17.4	35.7	47.3	50.3	45.5	34.8	16.1	-5.8	-19.0	15.2

Record Temperature Extremes

Maximum	47	49	50	70	92	91	92	85	82	63	49	44
Minimum	-62	-60	-50	-26	-6	31	37	27	12	-21	-44	-61
	Period of Record: 1944-1967											

MONTHLY MEANS

Precipitation	1.06	.94	.73	.64	.82	1.80	2.60	2.59	1.56	.95	.85	.88	15.42
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Snowfall* 11.7 10.6 8.1 5.9 .9 T .0 T 2.0 9.8 10.6 10.8 70.4
 (*Hail was included in Snowfall Period of Record: Precipitation 1944-1967
 Summary prior to January 1956) Snowfall 1946-1967

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	SSE	W	WSW	W	E	W	SW	SSE	W	W	WNW
Velocity	42	42	36	33	34	40	41	37	60	45	64
	Period of Record: 1949-1967										

Maximum and/or Minimum Anemometer Height: 100 feet 04/53; 12 feet 03/54

EIELSON AFB, FAIRBANKS, ALASKA

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY														FEBRUARY													
Hours	Number of Observations	Clearings < 100 Ft and/or Visibility < 1.0 MI	Clearings < 1000 Ft and/or Visibility < 3 MI	Clearings < 2000 Ft and/or Visibility < 6 MI	Cloud Cover 1-10	Thunder (With or Without Precipitation)	Main and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision											
00-02	2,139	5.4	25.4	37.6	15.1	....	1.1	1.1	22.3	....	25.2	21.3	2.7	1.2	....	21.5								
02-05	2,125	5.4	25.5	37.6	15.0	....	1.1	1.1	24.7	....	25.2	21.3	2.4	1.3	....	21.3								
05-08	2,139	5.9	27.4	37.3	15.3	....	1.1	1.1	23.1	....	25.7	21.3	2.7	1.6	....	21.7								
08-11	2,139	5.7	30.1	43.1	13.1	....	1.1	1.1	20.7	....	26.8	21.3	3.1	1.5	....	21.6								
11-14	2,139	7.2	26.0	35.0	17.5	....	1.1	1.1	19.3	....	21.3	21.3	2.0	1.6	....	21.6								
14-17	2,135	6.7	24.6	35.1	15.1	....	1.1	1.1	23.8	....	21.7	21.3	2.5	1.6	....	21.7								
17-20	2,139	5.3	24.6	36.1	14.6	....	1.1	1.1	21.2	....	21.8	21.3	2.6	1.7	....	21.5								
20-23	2,139	5.8	23.4	36.7	15.4	....	1.1	1.1	21.6	....	21.3	21.3	3.1	1.2	....	21.3								
All Hours	17,111	6.2	25.9	37.1	15.2	....	1.1	1.1	21.1	....	25.1	21.6	2.5	1.5	....	21.2								
MARCH														APRIL													
Hours	Number of Observations	Clearings < 100 Ft and/or Visibility < 1.0 MI	Clearings < 1000 Ft and/or Visibility < 3 MI	Clearings < 2000 Ft and/or Visibility < 6 MI	Cloud Cover 1-10	Thunder (With or Without Precipitation)	Main and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision											
00-02	2,139	4.8	27.0	36.6	15.2	1.1	1.1	1.1	15.3	....	19.0	34.6	1.1	1.1	....	34.8									
02-05	2,139	5.1	28.1	37.7	15.1	1.1	1.1	1.1	17.5	....	19.7	34.6	1.1	1.1	....	34.8									
05-08	2,138	5.5	28.0	37.1	15.4	1.1	1.1	1.1	15.4	....	19.7	34.6	1.1	1.1	....	34.8									
08-11	2,138	5.5	28.0	37.1	15.4	1.1	1.1	1.1	15.4	....	19.7	34.6	1.1	1.1	....	34.8									
11-14	2,139	5.1	28.0	37.1	15.4	1.1	1.1	1.1	15.4	....	19.7	34.6	1.1	1.1	....	34.8									
14-17	2,139	5.1	28.0	37.1	15.4	1.1	1.1	1.1	15.4	....	19.7	34.6	1.1	1.1	....	34.8									
17-20	2,139	5.1	28.0	37.1	15.4	1.1	1.1	1.1	15.4	....	19.7	34.6	1.1	1.1	....	34.8									
20-23	2,139	5.1	28.0	37.1	15.4	1.1	1.1	1.1	15.4	....	19.7	34.6	1.1	1.1	....	34.8									
All Hours	17,112	5.5	28.0	37.1	15.4	1.1	1.1	1.1	15.4	....	19.7	34.6	1.1	1.1	....	34.8									

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

... indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

EIELSON AFB, FAIRBANKS, ALASKA

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY													JUNE																								
Hours	Number of Observations	Ocellings <200 Ft and/or Visibility <1/2 MI	Ocellings <200 Ft and/or Visibility <3 MI	Ocellings <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Pain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision	Hours	Number of Observations	Ocellings <200 Ft and/or Visibility <1/2 MI	Ocellings <200 Ft and/or Visibility <3 MI	Ocellings <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Pain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision				
00-02	2,133	3.1	9.6	27.7	0	6.1	0	0	0	0	0	0	0	0	0	0	00-02	1,070	3.3	9.4	18.3	1	11.4	0	0	0	0	0	0	0	0	0	0	0	0		
03-05	2,133	4.8	11.7	23.0	0	7.3	0	0	0	0	0	0	0	0	0	0	03-05	1,981	5.3	11.5	17.2	1	13.4	0	0	0	0	0	0	0	0	0	0	0	0	0	
06-08	2,139	6.1	13.0	23.0	0	7.6	0	0	0	0	0	0	0	0	0	0	06-08	1,990	7.7	15.2	16.6	1	13.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09-11	2,139	1.1	6.0	14.8	21.8	0	6.6	0	0	0	0	0	0	0	0	0	09-11	1,999	7.1	16.7	15.3	3	11.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-14	2,139	4.0	13.8	15.9	1	7.7	0	0	0	0	0	0	0	0	0	0	12-14	1,990	4.4	16.3	16.9	1.5	9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-17	2,139	2.6	12.5	14.7	0	7.9	0	0	0	0	0	0	0	0	0	0	15-17	1,990	1.9	10.7	7.5	1.6	11.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-20	2,139	2.2	8.0	18.0	0	5.9	0	0	0	0	0	0	0	0	0	0	18-20	1,990	1.8	6.2	12.3	5	10.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21-23	2,133	3.2	8.2	23.9	0	6.7	0	0	0	0	0	0	0	0	0	0	21-23	1,978	2.3	6.7	15.5	2	11.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All Hours	17,074	1	4.1	11.5	21.3	0	7.0	0	0	0	0	0	0	0	0	0	All Hours	15,974	0	4.2	11.0	13.7	5	11.6	0	0	0	0	0	0	0	0	0	0	0	0	0

JULY													AUGUST																									
Hours	Number of Observations	Ocellings <200 Ft and/or Visibility <1/2 MI	Ocellings <200 Ft and/or Visibility <3 MI	Ocellings <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Pain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision	Hours	Number of Observations	Ocellings <200 Ft and/or Visibility <1/2 MI	Ocellings <200 Ft and/or Visibility <3 MI	Ocellings <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Pain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision					
00-02	1,993	6	8.0	17.4	16.9	3	16.1	0	0	0	0	0	0	0	0	0	00-02	1,990	5	10.0	28.0	13.4	0	17.8	0	0	0	0	0	0	0	0	0	0	0	0	0	
03-05	1,993	1.0	11.8	20.9	14.5	1	17.7	0	0	0	0	0	0	0	0	0	03-05	1,990	2.9	19.7	29.9	14.2	0	18.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-08	2,046	4	13.1	22.4	17.1	0	16.0	0	0	0	0	0	0	0	0	0	06-08	2,043	1.6	21.5	30.9	13.8	0	17.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09-11	2,046	1	11.8	25.3	17.1	1	13.0	0	0	0	0	0	0	0	0	0	09-11	2,042	0	19.0	31.1	14.0	0	16.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-14	2,046	7.1	24.5	18.7	1.5	12.5	0	0	0	0	0	0	0	0	0	0	12-14	2,042	1	11.2	24.1	11.0	0	13.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-17	2,046	2	5.0	17.8	11.9	1.3	13.6	0	0	0	0	0	0	0	0	0	15-17	2,043	1	6.0	17.0	10.3	4	13.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-20	2,046	4.0	12.0	15.8	0	13.3	0	0	0	0	0	0	0	0	0	0	18-20	2,043	1	4.0	14.5	13.3	5	13.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21-23	1,984	2	5.9	14.0	16.2	1	14.8	0	0	0	0	0	0	0	0	0	21-23	1,984	3	6.2	11.3	16.3	3	15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All Hours	16,100	3	8.4	19.4	15.3	5	14.7	0	0	0	0	0	0	0	0	0	All Hours	16,094	7	12.2	23.1	14.0	2	15.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

... indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

EIELSON AFB, FAIRBANKS, ALASKA

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER

Hours	Number of Observations	Observations < 100 FT and/or Visibility < 3 MI	Observations < 200 FT and/or Visibility < 3 MI	Observations < 300 FT and/or Visibility < 3 MI	Observations < 400 FT and/or Visibility < 3 MI	Observations < 500 FT and/or Visibility < 3 MI	Cloud Cover 1/10	Thunder (Light or Medium)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-02	1,890	1.3	9.5	18.8	29.1	37.5	5.4	1.3	3.8	3.4	3.3	6.7	6.7	1.3	1.3	0.0	0.0	6.7
03-05	1,896	3.4	14.8	25.7	37.2	37.1	9.4	1.6	3.4	3.4	3.4	10.6	10.6	1.6	1.6	0.0	0.0	10.6
06-08	1,946	2.4	16.5	25.8	33.5	34.8	10.7	1.2	3.8	3.8	3.8	11.5	11.5	1.2	1.2	0.0	0.0	11.5
09-11	1,975	5	15.6	23.7	33.1	32.8	5.6	1.0	3.2	3.2	3.2	6.8	6.8	1.0	1.0	0.0	0.0	6.8
12-14	1,986	1	11.1	21.9	32.0	32.6	6.5	0.6	2.3	2.3	2.3	3.2	3.2	0.6	0.6	0.0	0.0	3.2
15-17	1,988	1	7.4	15.6	28.2	33.7	5.8	0.6	2.9	2.9	2.9	3.4	3.4	0.6	0.6	0.0	0.0	3.4
18-20	1,982	2	7.4	15.5	28.0	33.7	5.8	0.6	3.7	3.7	3.7	3.4	3.4	0.6	0.6	0.0	0.0	3.4
21-23	1,959	9	11.2	20.5	28.8	33.3	5.2	0.9	3.3	3.3	3.3	6.1	6.1	0.9	0.9	0.0	0.0	6.1
All Hours	16,802	1.1	20.9	34.6	33.1	35.2	6.1	1.1	3.3	3.3	3.3	11.1	11.1	1.1	1.1	0.0	0.0	11.1

OCTOBER

Hours	Number of Observations	Observations < 100 FT and/or Visibility < 3 MI	Observations < 200 FT and/or Visibility < 3 MI	Observations < 300 FT and/or Visibility < 3 MI	Observations < 400 FT and/or Visibility < 3 MI	Observations < 500 FT and/or Visibility < 3 MI	Cloud Cover 1/10	Thunder (Light or Medium)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-02	2,049	1.0	20.9	33.3	28.8	24.0	2.8	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0
03-05	2,046	1.6	23.4	37.2	36.4	35.0	3.7	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.0	0.0	1.7
06-08	2,138	2.2	25.5	39.7	36.4	35.0	4.2	0.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.0	0.0	1.9
09-11	2,139	1.1	22.8	35.2	33.4	34.4	3.4	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.0	0.0	1.7
12-14	2,138	4	18.6	30.1	35.0	34.2	5.7	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.0	0.0	1.8
15-17	2,139	5	17.2	36.7	35.8	36.8	6.0	0.0	2.7	2.7	2.7	2.7	2.7	2.7	2.7	0.0	0.0	2.7
18-20	2,107	7	19.4	34.6	33.3	34.6	7.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0
21-23	2,046	1.3	19.3	34.2	28.0	28.0	6.2	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	1.5
All Hours	16,802	1.1	20.9	34.6	33.1	35.2	6.1	1.1	3.3	3.3	3.3	11.1	11.1	1.1	1.1	0.0	0.0	11.1

NOVEMBER

Hours	Number of Observations	Observations < 100 FT and/or Visibility < 3 MI	Observations < 200 FT and/or Visibility < 3 MI	Observations < 300 FT and/or Visibility < 3 MI	Observations < 400 FT and/or Visibility < 3 MI	Observations < 500 FT and/or Visibility < 3 MI	Cloud Cover 1/10	Thunder (Light or Medium)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-02	1,950	2.1	16.8	29.4	37.1	34.6	10.1	1.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	0.0	0.0	2.1
03-05	1,986	1.7	15.0	29.4	37.7	35.7	10.1	1.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	0.0	0.0	2.2
06-08	2,039	1.7	14.1	27.6	34.5	34.1	11.2	1.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0
09-11	2,040	1.1	15.9	27.8	28.1	31.2	10.2	1.3	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.0	0.0	1.8
12-14	2,046	9	11.6	24.6	29.4	27.9	9.9	1.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	0.0	0.0	2.3
15-17	2,046	6	14.1	26.6	27.9	27.1	9.2	1.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0
18-20	2,030	1.8	14.7	36.1	34.8	31.5	9.7	1.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	0.0	0.0	2.3
21-23	1,987	1.5	16.0	30.2	35.5	33.5	9.2	1.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	0.0	0.0	2.3
All Hours	16,815	1.3	15.0	28.5	31.8	32.7	9.3	1.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	0.0	0.0	2.2

DECEMBER

Hours	Number of Observations	Observations < 100 FT and/or Visibility < 3 MI	Observations < 200 FT and/or Visibility < 3 MI	Observations < 300 FT and/or Visibility < 3 MI	Observations < 400 FT and/or Visibility < 3 MI	Observations < 500 FT and/or Visibility < 3 MI	Cloud Cover 1/10	Thunder (Light or Medium)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-02	2,045	2.0	19.9	33.8	37.4	34.4	11.4	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0	1.3
03-05	2,047	1.9	20.3	35.3	37.5	35.5	11.2	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	1.2
06-08	2,139	1.9	20.9	34.7	36.3	34.3	11.2	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	1.2
09-11	2,139	5.5	24.5	35.7	36.0	36.0	12.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0
12-14	2,139	5.0	22.9	34.6	33.2	34.2	12.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	1.1
15-17	2,139	3.4	24.3	38.3	35.6	35.6	12.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	1.1
18-20	2,108	3.3	23.3	36.9	34.4	34.4	12.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	1.1
21-23	2,045	2.6	21.3	34.9	36.5	36.5	12.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0	1.3
All Hours	16,811	3.2	22.2	35.7	34.5	34.5	12.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	1.2

ANNUAL

Hours	Number of Observations	Observations < 100 FT and/or Visibility < 3 MI	Observations < 200 FT and/or Visibility < 3 MI	Observations < 300 FT and/or Visibility < 3 MI	Observations < 400 FT and/or Visibility < 3 MI	Observations < 500 FT and/or Visibility < 3 MI	Cloud Cover 1/10	Thunder (Light or Medium)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
All Hours	136,492	1.5	13.0	23.5	28.9	27.9	7.9	1.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	0.0	0.0	5.4

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

EIELSON AFB, FAIRBANKS, ALASKA WIND ROSES

JANUARY

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-3	4-6	7-10	11-16	17-21	22-27	28-31	34-40	41-47	48-55			56
N	2.2	.0	.2	.1	.0	.0	.0	.0	.0	.0	.0	3.2	3.3
NE	1.0	.4	.3	.0	.0	.0	.0	.0	.0	.0	.0	1.7	3.9
E	1.5	.2	.2	.0	.0	.0	.0	.0	.0	.0	.0	4.2	4.2
ESE	1.7	.2	.1	.1	.0	.0	.0	.0	.0	.0	.0	1.9	4.2
SE	1.6	.4	.2	.1	.0	.0	.0	.0	.0	.0	.0	1.2	7.4
SSE	2.9	1.8	.2	.0	.0	.0	.0	.0	.0	.0	.0	4.3	4.3
S	2.9	1.8	.2	.0	.0	.0	.0	.0	.0	.0	.0	4.3	3.3
SSW	1.8	.3	.1	.0	.0	.0	.0	.0	.0	.0	.0	1.2	3.3
SW	1.7	.4	.2	.0	.0	.0	.0	.0	.0	.0	.0	1.2	3.3
WSW	1.1	.6	.5	.2	.1	.0	.0	.0	.0	.0	.0	2.5	6.0
W	1.7	.4	.2	.1	.0	.0	.0	.0	.0	.0	.0	1.6	2.6
WNW	1.7	.4	.2	.1	.0	.0	.0	.0	.0	.0	.0	2.2	3.0
NW	1.7	.4	.2	.1	.0	.0	.0	.0	.0	.0	.0	2.2	3.0
NNW	1.7	.4	.2	.1	.0	.0	.0	.0	.0	.0	.0	2.2	3.0
N	1.7	.6	.2	.0	.0	.0	.0	.0	.0	.0	.0	2.5	3.4
WINDY	67.3											67.3	
CALM													
TOT	87.6	7.6	3.1	1.2	.4	.1	.0	.0	.0	.0	.0	100.0	1.3
TOTAL NUMBER OF OBSERVATIONS												1716	

FEBRUARY

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-3	4-6	7-10	11-16	17-21	22-27	28-31	34-40	41-47	48-55			56
N	2.6	1.1	.3	.0	.0	.0	.0	.0	.0	.0	.0	3.0	3.4
NE	.9	.7	.8	.4	.0	.0	.0	.0	.0	.0	.0	2.6	2.7
E	3.3	.3	.3	.0	.0	.0	.0	.0	.0	.0	.0	1.2	1.4
ESE	.4	.3	.2	.1	.0	.0	.0	.0	.0	.0	.0	1.0	2.6
SE	1.7	.7	.2	.1	.0	.0	.0	.0	.0	.0	.0	2.2	2.7
SSE	3.4	1.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	4.5	2.9
S	3.4	1.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	4.5	2.9
SSW	1.1	.4	.1	.0	.0	.0	.0	.0	.0	.0	.0	2.6	3.8
SW	1.1	.4	.1	.0	.0	.0	.0	.0	.0	.0	.0	2.6	3.8
WSW	1.6	1.2	1.0	.4	.2	.1	.0	.0	.0	.0	.0	4.3	2.7
W	1.6	1.2	1.0	.4	.2	.1	.0	.0	.0	.0	.0	4.3	2.7
WNW	1.9	.3	.1	.0	.0	.0	.0	.0	.0	.0	.0	1.3	2.9
NW	1.9	.3	.1	.0	.0	.0	.0	.0	.0	.0	.0	1.3	2.9
NNW	1.9	.3	.1	.0	.0	.0	.0	.0	.0	.0	.0	1.3	2.9
N	1.7	.6	.2	.0	.0	.0	.0	.0	.0	.0	.0	2.3	2.8
WINDY	61.0											61.0	
CALM													
TOT	82.3	9.7	5.4	1.9	.3	.1	.0	.0	.0	.0	.0	100.0	1.7
TOTAL NUMBER OF OBSERVATIONS												1050	

MARCH

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-3	4-6	7-10	11-16	17-21	22-27	28-31	34-40	41-47	48-55			56
N	3.0	2.3	1.0	.0	.0	.0	.0	.0	.0	.0	.0	6.4	4.1
NE	1.4	1.3	1.3	.2	.0	.0	.0	.0	.0	.0	.0	3.0	6.1
E	1.4	.4	.3	.2	.0	.0	.0	.0	.0	.0	.0	1.3	6.2
ESE	.7	.4	.4	.2	.0	.0	.0	.0	.0	.0	.0	1.7	2.9
SE	2.3	1.2	.7	.2	.1	.0	.0	.0	.0	.0	.0	4.2	4.2
SSE	2.9	1.6	.3	.0	.0	.0	.0	.0	.0	.0	.0	4.8	3.5
S	2.9	1.6	.3	.0	.0	.0	.0	.0	.0	.0	.0	4.8	3.5
SSW	1.1	.9	.2	.0	.0	.0	.0	.0	.0	.0	.0	2.2	4.0
SW	1.3	1.2	.9	.4	.1	.0	.0	.0	.0	.0	.0	4.2	5.9
WSW	1.8	1.5	.9	.4	.1	.0	.0	.0	.0	.0	.0	5.5	5.8
W	1.8	1.8	1.3	.5	.1	.0	.0	.0	.0	.0	.0	6.9	3.7
WNW	1.8	.7	.5	.0	.0	.0	.0	.0	.0	.0	.0	2.9	3.7
NW	1.8	.7	.5	.0	.0	.0	.0	.0	.0	.0	.0	2.9	3.7
NNW	2.3	1.3	.3	.0	.0	.0	.0	.0	.0	.0	.0	4.0	3.6
WINDY	45.1											45.1	
CALM													
TOT	70.4	17.4	9.2	2.5	.4	.1	.0	.0	.0	.0	.0	100.0	2.6
TOTAL NUMBER OF OBSERVATIONS												1710	

APRIL

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-3	4-6	7-10	11-16	17-21	22-27	28-31	34-40	41-47	48-55			56
N	2.6	2.8	1.2	.1	.0	.0	.0	.0	.0	.0	.0	6.8	4.7
NE	1.0	1.2	1.4	.6	.2	.0	.0	.0	.0	.0	.0	4.4	7.2
E	.4	.4	.4	.2	.1	.0	.0	.0	.0	.0	.0	1.5	7.0
ESE	.6	.7	.7	.3	.0	.0	.0	.0	.0	.0	.0	2.3	6.4
SE	2.4	1.5	1.3	.5	.1	.0	.0	.0	.0	.0	.0	3.6	6.8
SSE	3.0	1.7	.4	.1	.0	.0	.0	.0	.0	.0	.0	5.2	3.7
S	3.0	1.7	.4	.1	.0	.0	.0	.0	.0	.0	.0	5.2	3.7
SSW	1.1	1.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	2.3	4.1
SW	1.1	1.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	2.3	4.1
WSW	1.4	2.5	2.3	.9	.2	.0	.0	.0	.0	.0	.0	7.3	7.0
W	2.3	3.5	3.0	1.2	.1	.0	.0	.0	.0	.0	.0	10.3	6.4
WNW	2.0	1.3	.6	.1	.0	.0	.0	.0	.0	.0	.0	3.9	4.4
NW	2.0	1.3	.6	.1	.0	.0	.0	.0	.0	.0	.0	3.9	4.4
NNW	1.8	1.5	.6	.1	.0	.0	.0	.0	.0	.0	.0	4.1	4.3
WINDY	27.8											27.8	
CALM													
TOT	52.7	24.5	16.7	5.3	.7	.0	.0	.0	.0	.0	.0	100.0	4.0
TOTAL NUMBER OF OBSERVATIONS												1058	

EIELSON AFB, FAIRBANKS, ALASKA WIND ROSES

		MAY										JUNE												
		Speed in Knots					Speed in Knots					Speed in Knots					Speed in Knots							
		0-5	6-10	11-15	16-20	21-25	26-30	31-40	41-50	51-55	56	Total	Dir.	0-5	6-10	11-15	16-20	21-25	26-30	31-40	41-47	48-55	56	Total
Dir.		2.0	1.9	1.3	3.3	0	0	0	0	0	3.6	2.3	N	1.8	1.5	7.1	1.1	0	0	0	0	0	0	4.2
N		1.5	1.6	1.0	1.1	0	0	0	0	0	5.8	6.7	ENE	1.2	1.9	1.0	0	0	0	0	0	0	0	4.2
ENE		1.8	1.0	1.1	4.1	0	0	0	0	3.4	6.7	ESE	1.7	1.7	1.5	0	0	0	0	0	0	0	0	3.1
ESE		1.7	0	0	0	0	0	0	0	2.5	6.9	SE	1.8	1.8	0	0	0	0	0	0	0	0	0	3.7
SE		2.0	1.4	1.1	3.3	0	0	0	0	4.8	5.8	SSE	2.4	1.8	0	0	0	0	0	0	0	0	0	5.3
SSE		2.9	1.9	7.7	0	0	0	0	0	5.6	4.2	SW	3.1	2.1	1.0	0	0	0	0	0	0	0	0	6.6
SW		1.3	1.0	0.5	1.1	0	0	0	0	2.9	4.5	SSW	1.5	1.4	1.6	0	0	0	0	0	0	0	0	3.6
SSW		1.4	2.1	2.0	6.3	0	0	0	0	6.7	6.7	W	2.0	2.8	2.6	4.4	0	0	0	0	0	0	0	7.3
W		2.4	3.4	3.3	1.0	0	0	0	0	10.4	6.4	WNW	2.6	3.9	3.7	1.4	0	0	0	0	0	0	0	11.8
WNW		1.8	1.5	1.8	1.2	0	0	0	0	4.7	5.2	NW	1.8	1.7	1.0	0	0	0	0	0	0	0	0	4.7
NW		1.3	1.5	0.9	1.2	0	0	0	0	3.9	5.3	NNW	1.1	1.1	1.5	0	0	0	0	0	0	0	0	2.7
NNW		21.6								21.6		WINDY	22.6											22.6
WINDY		47.1	25.8	20.5	5.9	6	3	0	0	100.0	4.5	TOT	49.5	26.5	18.2	5.2	.5	.1	.0					100.0
TOT		TOTAL NUMBER OF OBSERVATIONS: 17993										TOTAL NUMBER OF OBSERVATIONS: 15991												

		JULY										AUGUST												
		Speed in Knots					Speed in Knots					Speed in Knots					Speed in Knots							
		0-5	6-10	11-15	16-20	21-25	26-30	31-40	41-50	51-55	56	Total	Dir.	0-5	6-10	11-15	16-20	21-25	26-30	31-40	41-47	48-55	56	Total
Dir.		1.6	1.2	4	0	0	0	0	0	0	3.3	4.0	N	2.4	1.2	0	0	0	0	0	0	0	0	4.0
N		1.0	0.7	3	1	0	0	0	0	2.6	5.3	NE	1.2	0.6	0	0	0	0	0	0	0	0	0	2.2
NE		1.6	0.5	2	0	0	0	0	0	1.4	4.6	ESE	1.3	0.5	0	0	0	0	0	0	0	0	0	1.9
ESE		1.9	0.7	3	0	0	0	0	0	2.2	4.2	E	1.6	0.7	0	0	0	0	0	0	0	0	0	2.8
E		2.9	1.8	6	12	0	0	0	0	5.5	4.2	ESE	2.0	1.7	1.0	0	0	0	0	0	0	0	0	5.3
ESE		3.9	2.0	7	11	0	0	0	0	7.7	4.2	SE	2.3	1.8	0.6	0	0	0	0	0	0	0	0	4.9
SE		2.0	1.8	4	11	0	0	0	0	4.3	4.2	SSE	1.7	1.4	0.5	0	0	0	0	0	0	0	0	3.6
SSE		1.7	2.5	1.3	0	0	0	0	0	6.4	5.0	SW	2.2	2.0	1.4	0	0	0	0	0	0	0	0	6.0
SW		3.2	4.7	3.5	1.7	0	0	0	0	12.3	5.9	WSW	2.7	3.1	0.6	0	0	0	0	0	0	0	0	9.1
WSW		1.6	2.0	1.4	0.3	0	0	0	0	1.3	5.6	W	1.5	1.4	0.8	0	0	0	0	0	0	0	0	3.9
W		1.2	1.2	0.3	0	0	0	0	0	2.8	4.3	WNW	1.6	1.0	0.2	0	0	0	0	0	0	0	0	2.9
WNW		26.5								26.5		WINDY	31.8											31.8
WINDY		55.5	27.6	13.8	2.7	1	1	0	0	100.0	3.6	TOT	61.9	23.1	11.9	2.8	.3	.0						100.0
TOT		TOTAL NUMBER OF OBSERVATIONS: 16118										TOTAL NUMBER OF OBSERVATIONS: 16595												

EIELSON AFB, FAIRBANKS, ALASKA WIND ROSES

SEPTEMBER

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			≥56
N	3.1	1.8	8	0	0	0	0	0	0	0	0	5.7	4.0
NNE	1.2	1.3	7	1	0	0	0	0	0	0	0	3.3	2.0
NNE	1.1	1.0	9	0	0	0	0	0	0	0	0	3.3	2.0
NNE	1.3	1.0	8	0	0	0	0	0	0	0	0	1.8	1.3
E	1.3	9	5	2	0	0	0	0	0	0	0	2.9	2.0
ESE	0.7	1.9	1.2	0	0	0	0	0	0	0	0	6.0	6.7
SE	1.9	1.4	1.7	2	0	0	0	0	0	0	0	4.2	4.8
SSE	3.1	2.0	4	0	0	0	0	0	0	0	0	2.1	1.6
SW	2.2	1.5	7	3	0	0	0	0	0	0	0	4.7	4.7
WSW	1.3	2.7	1.6	1	0	0	0	0	0	0	0	2.3	1.1
W	2.4	1.7	1.3	1	0	0	0	0	0	0	0	3.1	2.6
WNW	2.0	1.1	2	0	0	0	0	0	0	0	0	3.1	2.6
VARBL	36.9											36.9	
CALM													
TOT	65.0	80.5	11.1	3.1	4	0	0	0	0	0	0	100.0	3.0
TOTAL NUMBER OF OBSERVATIONS												15796	

OCTOBER

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			≥56
N	2.8	2.0	6	0	0	0	0	0	0	0	0	5.4	3.9
NNE	1.0	1.3	1.0	1	0	0	0	0	0	0	0	3.3	2.5
NNE	1.5	2	4	1	0	0	0	0	0	0	0	1.5	2.0
E	1.0	6	4	2	1	0	0	0	0	0	0	6.2	5.4
ESE	1.7	9	6	4	1	0	0	0	0	0	0	3.7	2.5
SE	1.8	9	4	1	0	0	0	0	0	0	0	4.1	3.2
SSE	2.5	7	1	0	0	0	0	0	0	0	0	2.4	2.5
SW	2.4	1.3	3	1	0	0	0	0	0	0	0	1.4	1.1
WSW	1.8	1.2	1	1	0	0	0	0	0	0	0	4.7	2.4
W	1.9	3	2	0	0	0	0	0	0	0	0	1.4	3.9
WNW	2.5	1.2	1	1	0	0	0	0	0	0	0	4.2	3.7
VARBL	47.2											47.2	
CALM													
TOT	73.5	16.2	7.8	2.0	4	1	0	0	0	0	0	100.0	2.4
TOTAL NUMBER OF OBSERVATIONS												16765	

NOVEMBER

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			≥56
N	2.6	1.1	2	0	0	0	0	0	0	0	0	3.9	3.2
NNE	0	0	4	1	0	0	0	0	0	0	0	1.9	2.0
NNE	0	0	1	1	0	0	0	0	0	0	0	4.8	4.4
E	0.8	3	2	0	0	0	0	0	0	0	0	1.4	4.9
ESE	1.2	7	3	1	0	0	0	0	0	0	0	1.2	2.0
SE	1.5	9	4	1	0	0	0	0	0	0	0	2.9	4.6
SSE	3.0	1.4	0	0	0	0	0	0	0	0	0	1.3	3.3
SW	1.5	6	0	0	0	0	0	0	0	0	0	2.4	2.7
WSW	1.2	6	4	1	0	0	0	0	0	0	0	2.8	2.9
W	1.5	12	2	0	0	0	0	0	0	0	0	1.9	4.8
WNW	2.0	7	1	0	0	0	0	0	0	0	0	2.7	3.1
VARBL	64.1											64.1	
CALM													
TOT	84.3	9.6	4.4	1.2	4	1	0	0	0	0	0	100.0	1.6
TOTAL NUMBER OF OBSERVATIONS												16019	

DECEMBER

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			≥56
N	2.2	5	1	0	0	0	0	0	0	0	0	2.8	3.0
NNE	5	3	2	0	0	0	0	0	0	0	0	1.0	4.3
NNE	5	1	1	0	0	0	0	0	0	0	0	1.5	2.2
E	7	1	1	0	0	0	0	0	0	0	0	1.0	4.4
ESE	2.0	5	4	2	0	0	0	0	0	0	0	1.3	2.7
SE	1.6	6	2	1	0	0	0	0	0	0	0	2.6	3.8
SSE	2.9	4	1	1	0	0	0	0	0	0	0	1.5	3.8
SW	1.4	4	2	0	0	0	0	0	0	0	0	1.5	3.2
WSW	1.9	5	4	2	1	0	0	0	0	0	0	2.1	6.0
W	1.4	1	1	0	0	0	0	0	0	0	0	2.7	2.9
WNW	1.4	1	1	0	0	0	0	0	0	0	0	1.9	3.1
VARBL	70.4											70.4	
CALM													
TOT	89.3	6.2	2.9	1.2	3	1	0	0	0	0	0	100.0	1.2
TOTAL NUMBER OF OBSERVATIONS												16800	

ANNUAL

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			≥56
N	2.4	1.5	6	1	0	0	0	0	0	0	0	4.6	4.1
NNE	1.0	9	7	1	0	0	0	0	0	0	0	2.7	5.3
NNE	1.6	4	3	1	0	0	0	0	0	0	0	1.9	2.7
E	1.1	6	4	1	0	0	0	0	0	0	0	2.2	4.9
ESE	2.1	12	6	4	1	0	0	0	0	0	0	4.5	2.2
SE	1.8	1.8	5	1	0	0	0	0	0	0	0	3.7	4.7
SSE	3.1	9	3	0	0	0	0	0	0	0	0	2.4	4.0
SW	1.9	1.4	1.8	2	0	0	0	0	0	0	0	4.0	2.8
WSW	2.0	2.2	1.9	1.6	1	0	0	0	0	0	0	6.8	6.1
W	1.0	9	6	1	0	0	0	0	0	0	0	2.7	2.3
WNW	1.7	1.0	1	1	0	0	0	0	0	0	0	3.1	3.9
VARBL	43.6											43.6	
CALM													
TOT	68.3	17.6	10.4	2.9	4	1	0	0	0	0	0	100.0	2.8
TOTAL NUMBER OF OBSERVATIONS												19645	

ELMENDORF AFB ANCHORAGE, ALASKA (Lat. 61°15'N, Long. 149°48'W, Elev. 222 ft.)

Elmendorf AFB lies in a broad valley with adjacent narrow bodies of water. Knik Arm is only two miles west, with Cook Inlet and Turnagain Arm 12 miles southwest. The city of Anchorage lies approximately four miles to the southwest. The terrain rises gradually to the east for about ten miles, with marshes interspersed with glacial moraines, shallow depressions, small streams and knolls. Beyond this area, the Chugach Mountains rise abruptly into a range oriented north-northeast, south-southwest, with average elevations of 4,000-5,000 feet and some peaks up to 10,000 feet.

Winter lasts from mid-October to mid-April and summer from June through early September with the spring and fall being periods of rapid transition.

In winter, the most important factor governing the climate of the area is the presence of low pressure systems in the Gulf of Alaska. This results in a strong southerly flow of air off the Gulf into the mountainous coastal regions where it is lifted to produce cloudiness and precipitation. A southwesterly flow will produce short periods of poor weather, while a northerly flow usually results in cloudless days. However, due to the close proximity of the water extensive formations of supercooled fog may occur over Cook Inlet and Knik Arm resulting in low visibilities especially during December and January.

Thundershowers occasionally develop during the warmer months, May through September, however they are seldom as violent as the thunderstorms

ELMENDORF AFB (Cont'd.)

which occur in many of the conterminous 48 states during the same period.

Clear icing conditions do occur in the Anchorage area but it is never as great a problem as is rime ice.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from March 1941-October 1953, and April 1956-October 1968; with the exception of cloud cover for which data are not available prior to 1946.

ELMENDORF AFB ANCHORAGE, ALASKA

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	19.6	25.9	31.7	43.7	54.6	62.4	65.0	63.4	55.2	41.1	26.8	19.4	42.4
Mean	12.2	17.9	23.0	35.9	46.5	54.9	58.2	56.4	48.5	34.8	20.2	12.7	35.1
Minimum	4.7	9.6	13.9	27.8	38.2	47.3	51.2	49.1	41.5	28.4	13.6	5.8	27.6

Record Temperature Extremes

Maximum	49	58	51	63	80	84	83	81	74	63	57	53
Minimum	-36	-43	-24	-20	0	33	34	29	20	-6	-20	-34

Period of Record: 1941-1953, 1956-1967

MONTHLY MEANS

	Precipitation (Inches)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Precipitation	1.21	.89	.99	.62	.65	1.19	2.16	2.44	2.56	1.58	1.30	1.40	16.99
Snowfall*	12.0	9.3	8.9	5.3	.4	.0	.0	.0	.3	7.2	12.9	13.2	69.5

(*Hail was included in Snowfall Summary prior to January 1956)
 Period of Record: 1941-1953, 1956-1967
 Snowfall 1946-1953, 1956-1967

Surface Winds (Knots) - Record Peak Gusts

Wind Direction Velocity	Surface Winds (Knots)										
	ENE	NNE	E	SSE	SE	SSW	SSE	S	E	N	ENE
66	61	47	42	49	36	34	38	42	62	81	48

Period of Record: 1946-1947, 1949-1953, 1956-1958, 1961-1967

Maximum and/or Minimum Anemometer Height: 80 feet 04/56; 14 feet 02/61.

ELMENDORF AFB, ANCHORAGE, ALASKA

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY														FEBRUARY																	
Hours	Number of Observations	Chillings <200 Ft and/or Visibility <1/2 MI	Chillings <200 Ft and/or Visibility <3 MI	Chillings <200 Ft and/or Visibility <5 MI	Cloud Cover 5/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Precipitation of Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Chillings <200 Ft and/or Visibility <1/2 MI	Chillings <200 Ft and/or Visibility <3 MI	Chillings <200 Ft and/or Visibility <5 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Precipitation of Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	2,228	5.1	18.6	29.0	36.0	....	2.2	1.1	16.8	....	19.3	12.6	1.3	....	14.1	00-02	2,033	3.1	13.4	23.0	30.0	....	1.5	....	19.5	....	16.6	7.6	1.3	....	9.0
03-05	2,229	5.2	18.8	28.8	34.2	....	2.3	1.1	17.4	....	19.8	13.1	1.3	....	14.4	03-05	2,033	3.6	14.8	24.0	34.2	....	1.5	....	19.3	....	16.6	8.5	1.2	....	9.0
06-08	2,229	5.8	19.9	30.2	31.6	....	2.2	....	15.6	....	18.0	15.4	2.2	....	17.5	06-08	2,032	3.6	15.8	24.8	28.5	....	1.9	....	19.0	....	16.8	10.2	2.9	....	13.2
09-11	2,228	4.2	18.8	28.3	27.2	....	1.8	1.0	13.8	....	16.9	10.9	4.3	....	19.1	09-11	2,034	2.9	15.4	24.3	28.3	....	2.0	....	19.7	....	17.6	10.5	4.2	....	14.5
12-14	2,228	2.6	15.2	24.5	29.1	....	1.8	....	15.3	....	17.9	13.5	3.7	....	15.0	12-14	2,031	1.1	10.8	18.4	27.1	....	2.0	....	14.4	6.4	2.6	....	9.1		
15-17	2,229	3.1	17.4	26.8	30.6	....	1.7	....	14.8	....	17.0	11.6	3.7	....	15.0	15-17	2,034	....	9.6	18.2	26.2	....	1.9	....	11.9	....	13.5	5.3	2.4	....	7.7
18-20	2,230	4.4	19.6	29.9	33.8	....	1.5	1.1	16.9	....	19.1	12.9	2.1	....	19.3	18-20	2,033	1.6	11.0	20.7	30.7	....	1.8	....	14.2	....	15.8	6.2	1.7	....	8.0
21-23	2,229	5.7	19.8	28.8	35.1	....	1.6	....	16.6	....	18.7	13.7	1.6	....	15.3	21-23	2,034	2.4	12.5	21.8	34.5	....	1.6	....	15.1	....	16.3	7.2	1.3	....	8.6
All Hours 17,831	4.5	18.5	28.3	32.0	....	1.9	1.0	15.9	....	18.2	13.2	2.5	....	15.7	All Hours 16,264	2.4	12.9	21.9	30.4	....	1.0	....	1.0	....	14.6	....	16.2	7.7	2.2	....	10.0

MARCH														APRIL																	
Hours	Number of Observations	Chillings <200 Ft and/or Visibility <1/2 MI	Chillings <200 Ft and/or Visibility <3 MI	Chillings <200 Ft and/or Visibility <5 MI	Cloud Cover 5/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Precipitation of Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Chillings <200 Ft and/or Visibility <1/2 MI	Chillings <200 Ft and/or Visibility <3 MI	Chillings <200 Ft and/or Visibility <5 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Precipitation of Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	2,296	....	10.3	18.9	41.2	....	2.1	....	12.9	....	19.0	3.4	1.2	....	4.4	00-02	2,296	....	6.6	14.4	35.0	....	3.8	....	8.7	....	11.8	2.7	....	3.9
03-05	2,296	1.3	10.9	19.5	37.9	2.6	12.8	19.3	3.7	1.2	4.9	03-05	2,296	8.0	15.3	28.7	3.4	8.9	11.7	4.8	3.0	7.7
06-08	2,296	1.3	11.4	19.5	36.4	1.4	12.3	19.7	7.1	4.4	11.6	06-08	2,297	9.4	15.8	24.8	3.0	8.0	10.8	5.1	3.4	8.4
09-11	2,297	....	9.7	16.8	29.4	....	1.1	....	11.5	....	12.9	6.8	2.4	....	9.3	09-11	2,300	....	7.4	13.7	25.4	....	3.7	....	6.8	....	10.0	3.1	....	4.0
12-14	2,295	....	7.7	14.6	29.4	....	1.6	....	10.1	....	11.5	3.8	....	....	4.4	12-14	2,299	....	5.4	12.1	26.9	....	4.2	....	5.7	....	9.5	2.2	....	2.4
15-17	2,295	....	7.2	14.2	30.1	....	2.3	....	9.9	....	11.8	3.1	....	....	3.7	15-17	2,295	....	4.4	10.8	21.7	....	5.2	....	5.0	....	9.6	1.9	....	1.9
18-20	2,297	....	8.9	17.9	32.8	....	1.8	....	11.4	....	12.8	4.0	1.5	....	5.4	18-20	2,298	....	5.1	12.0	23.4	....	4.4	....	4.9	....	9.1	1.8	....	2.3
21-23	2,294	....	9.9	18.7	38.7	....	1.9	....	12.3	....	13.9	3.3	1.1	....	4.4	21-23	2,298	....	4.8	12.8	29.4	....	4.0	....	5.9	....	9.6	2.0	....	2.7
All Hours 18,960	7	9.5	17.5	33.0	....	1.9	1.1	11.7	....	13.3	4.4	1.6	1.1	....	6.0	All Hours 18,383	4	6.5	13.4	26.5	....	4.0	....	6.7	....	10.3	3.0	1.2	....	4.1

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

.... indicates that the condition has occurred exactly 0.00 percent of the time. A blank indicates that the data are not available.

ELMENDORF AFB, ANCHORAGE, ALASKA

Percentage Frequencies of Occurrence of Specified Weather Conditions

Hours	MAY												JUNE											
	Number of Observations	Wettable (20° F and/or 10/10 MI)	Wettable (3000 FT and/or 10/10 MI)	Wettable (4000 FT and/or 10/10 MI)	Cloud Cover 10/10	Thunder (20° F and/or 10/10 MI)	Freezing Rain and/or Sleet	Snow and/or Sleet	Blizzards	Total Occurrences of (Blizzards and/or Suspended)	Blowing Snow	Smoke and/or Haze	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of (Dust and/or Suspended)							
00-02	2,236	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
02-04	2,381	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
04-06	2,411	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
06-08	2,422	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
08-10	2,466	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
10-12	2,462	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
12-14	2,465	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
14-16	2,432	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
16-18	2,439	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
18-20	2,439	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
20-22	2,439	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
22-24	2,439	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
24-26	2,439	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
26-28	2,439	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
28-30	2,439	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
30-31	2,439	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
ALL	13,439	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							

Hours	JULY												AUGUST											
	Number of Observations	Wettable (20° F and/or 10/10 MI)	Wettable (3000 FT and/or 10/10 MI)	Wettable (4000 FT and/or 10/10 MI)	Cloud Cover 10/10	Thunder (20° F and/or 10/10 MI)	Freezing Rain and/or Sleet	Snow and/or Sleet	Blizzards	Total Occurrences of (Blizzards and/or Suspended)	Blowing Snow	Smoke and/or Haze	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of (Dust and/or Suspended)							
00-02	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
02-04	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
04-06	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
06-08	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
08-10	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
10-12	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
12-14	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
14-16	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
16-18	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
18-20	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
20-22	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
22-24	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
24-26	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
26-28	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
28-30	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
30-31	2,416	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
ALL	13,439	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1							

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

ELMENDORF AFB, ANCHORAGE, ALASKA

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER												OCTOBER											
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 MI	Cellings <300 Ft and/or Visibility <3/4 MI	Cellings <400 Ft and/or Visibility <5/8 MI	Cellings <500 Ft and/or Visibility <3/4 MI	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Precipitation			
00-02	2,333	1.2	7.7	15.6	21.9	4.2	1.1	1.1	4.3	21.0	4.2	1.5	4.5	21.0	4.2	1.1	1.1	4.3	21.0	4.2	1.1	1.1	
03-05	2,338	1.7	9.3	17.7	19.8	6.2	3.3	1.7	4.3	21.3	6.2	1.2	4.4	21.3	6.2	3.3	1.7	4.3	21.3	6.2	1.2	4.4	
06-08	2,340	2.4	10.9	19.3	13.2	1.7	1.7	1.7	9.9	20.0	1.7	1.2	4.2	20.0	1.7	1.7	1.7	9.9	20.0	1.7	1.2	4.2	
09-11	2,338	4.0	10.0	16.9	14.2	4.1	1.6	1.6	4.6	10.0	4.1	1.6	4.6	10.0	4.1	1.6	1.6	4.6	10.0	4.1	1.6	1.6	
12-14	2,346	6.0	12.6	13.7	17.9	1.9	1.1	1.1	2.0	10.0	1.9	1.1	3.3	10.0	1.9	1.1	1.1	2.0	10.0	1.9	1.1	1.1	
15-17	2,340	1.1	4.5	10.8	12.3	2.0	2.2	2.2	2.1	13.9	2.0	2.2	4.4	13.9	2.0	2.2	2.2	2.1	13.9	2.0	2.2	2.2	
18-20	2,339	5.5	5.4	12.5	14.5	2.5	1.1	1.1	2.6	21.3	2.5	1.1	4.4	21.3	2.5	1.1	1.1	2.6	21.3	2.5	1.1	1.1	
21-23	2,337	1.0	6.8	13.8	21.4	3.0	0.0	0.0	3.0	22.0	3.0	0.0	4.4	22.0	3.0	0.0	0.0	3.0	22.0	3.0	0.0	0.0	
All Hours	18,705	9.9	7.6	14.9	16.5	4.0	4.4	4.4	4.4	20.2	4.0	4.4	4.4	20.2	4.0	4.4	4.4	4.4	20.2	4.0	4.4	4.4	

NOVEMBER												DECEMBER											
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 MI	Cellings <300 Ft and/or Visibility <3/4 MI	Cellings <400 Ft and/or Visibility <5/8 MI	Cellings <500 Ft and/or Visibility <3/4 MI	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Precipitation			
00-02	2,158	3.5	16.4	25.3	34.9	0.1	1.3	1.3	9.3	17.1	0.1	1.3	1.3	17.1	0.1	1.3	1.3	9.3	17.1	0.1	1.3	1.3	
03-05	2,157	4.5	16.9	27.3	33.9	9.6	1.2	0.0	10.7	16.3	9.6	1.2	1.2	16.3	9.6	1.2	0.0	10.7	16.3	9.6	1.2	1.2	
06-08	2,158	4.2	18.4	26.9	29.0	10.6	2.6	2.6	13.1	16.0	10.6	2.6	2.6	16.0	10.6	2.6	2.6	13.1	16.0	10.6	2.6	2.6	
09-11	2,160	3.3	17.0	24.8	22.3	10.8	4.9	1.1	14.8	15.2	10.8	4.9	1.1	15.2	10.8	4.9	1.1	14.8	15.2	10.8	4.9	1.1	
12-14	2,159	1.5	14.7	22.7	22.4	6.8	2.7	2.2	9.6	14.2	6.8	2.7	2.2	14.2	6.8	2.7	2.2	9.6	14.2	6.8	2.7	2.2	
15-17	2,158	2.7	14.2	23.3	24.6	6.6	3.1	1.2	9.5	14.4	6.6	3.1	1.2	14.4	6.6	3.1	1.2	9.5	14.4	6.6	3.1	1.2	
18-20	2,158	2.7	15.9	24.9	30.8	6.0	2.3	1.1	8.1	16.0	6.0	2.3	1.1	16.0	6.0	2.3	1.1	8.1	16.0	6.0	2.3	1.1	
21-23	2,156	3.3	15.4	24.9	33.4	6.4	1.7	0.0	8.0	14.7	6.4	1.7	0.0	14.7	6.4	1.7	0.0	8.0	14.7	6.4	1.7	0.0	
All Hours	17,264	3.2	16.1	25.0	28.9	6.0	2.5	1.1	10.4	15.5	6.0	2.5	1.1	15.5	6.0	2.5	1.1	10.4	15.5	6.0	2.5	1.1	

ANNUAL																						
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 MI	Cellings <300 Ft and/or Visibility <3/4 MI	Cellings <400 Ft and/or Visibility <5/8 MI	Cellings <500 Ft and/or Visibility <3/4 MI	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Precipitation		
All Hours	220,192	1.4	9.9	18.0	23.4	5.3	1.4	1.1	6.7	15.7	5.3	1.4	1.4	15.7	5.3	1.4	1.4	6.7	15.7	5.3	1.4	1.4

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

... indicates that the condition has occurred exactly 0.00 percent of the time. A blank indicates that the data are not available.

ELMENDORF AFB, ANCHORAGE, ALASKA WIND ROSES

Dir.	JANUARY										Total	Mean Wind Speed	
	Speed in Knots												
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			56
N	2.9	3.6	3.1	1.8	1.2	1.1	1.0	1.0	1.0	1.0	1.0	15.0	6.3
NE	4.6	4.2	3.8	2.1	1.4	1.1	1.0	1.0	1.0	1.0	1.0	31.6	6.0
E	4.6	4.2	3.8	2.1	1.4	1.1	1.0	1.0	1.0	1.0	1.0	31.6	6.0
SE	4.6	4.2	3.8	2.1	1.4	1.1	1.0	1.0	1.0	1.0	1.0	31.6	6.0
S	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	10.0	1.0
SW	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	10.0	1.0
W	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	10.0	1.0
NW	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	10.0	1.0
VARBL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	10.0	1.0
CALM	25.5											25.5	
TOT	24.5	26.2	12.6	4.2	3.3	.8	.3	.1	.0	.0	.0	100.0	4.2
TOTAL NUMBER OF OBSERVATIONS											1785		

Dir.	FEBRUARY										Total	Mean Wind Speed	
	Speed in Knots												
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			56
N	5.4	5.6	4.3	1.6	.6	.3	.2	.2	.0	.0	.0	18.0	6.8
NE	3.0	2.9	1.6	.3	.1	.2	.1	.1	.1	.1	.1	9.1	4.4
E	3.1	2.8	.3	.0	.0	.1	.1	.1	.1	.1	.1	6.3	4.1
SE	1.4	.7	.4	.2	.1	.1	.1	.1	.1	.1	.1	2.2	1.7
S	1.4	.7	.4	.2	.1	.1	.1	.1	.1	.1	.1	2.2	1.7
SW	1.4	.7	.4	.2	.1	.1	.1	.1	.1	.1	.1	2.2	1.7
W	1.4	.7	.4	.2	.1	.1	.1	.1	.1	.1	.1	2.2	1.7
NW	1.4	.7	.4	.2	.1	.1	.1	.1	.1	.1	.1	2.2	1.7
VARBL	1.4	.7	.4	.2	.1	.1	.1	.1	.1	.1	.1	2.2	1.7
CALM	22.8											22.8	
TOT	21.9	26.2	13.4	4.9	1.9	1.3	.4	.1	.0	.0	.0	100.0	4.6
TOTAL NUMBER OF OBSERVATIONS											1657		

Dir.	MARCH										Total	Mean Wind Speed	
	Speed in Knots												
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			56
N	4.6	6.4	6.0	2.5	.6	.2	.1	.1	.0	.0	.0	20.3	7.1
NE	3.2	2.3	.7	.2	.1	.1	.1	.1	.1	.1	.1	8.5	5.7
E	2.5	1.4	.2	.0	.0	.0	.0	.0	.0	.0	.0	4.2	3.6
SE	1.8	.5	.1	.0	.0	.0	.0	.0	.0	.0	.0	2.0	2.0
S	1.4	.5	.5	.3	.1	.1	.1	.1	.1	.1	.1	5.0	2.0
SW	1.4	.5	.5	.3	.1	.1	.1	.1	.1	.1	.1	5.0	2.0
W	1.4	.5	.5	.3	.1	.1	.1	.1	.1	.1	.1	5.0	2.0
NW	1.4	.5	.5	.3	.1	.1	.1	.1	.1	.1	.1	5.0	2.0
VARBL	1.4	.5	.5	.3	.1	.1	.1	.1	.1	.1	.1	5.0	2.0
CALM	26.3											26.3	
TOT	47.4	26.1	16.6	7.0	1.9	.9	.1	.0	.0	.0	.0	100.0	4.6
TOTAL NUMBER OF OBSERVATIONS											1836		

Dir.	APRIL										Total	Mean Wind Speed	
	Speed in Knots												
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			56
N	3.8	5.7	3.7	1.1	.2	.0	.0	.0	.0	.0	.0	14.7	6.2
NE	1.8	2.1	1.2	.3	.0	.0	.0	.0	.0	.0	.0	3.4	2.0
E	1.7	1.0	.4	.1	.0	.0	.0	.0	.0	.0	.0	2.2	1.8
SE	1.2	.8	.5	.2	.0	.0	.0	.0	.0	.0	.0	1.7	1.4
S	1.2	.8	.5	.2	.0	.0	.0	.0	.0	.0	.0	2.7	2.5
SW	1.2	.8	.5	.2	.0	.0	.0	.0	.0	.0	.0	4.0	2.8
W	1.2	.8	.5	.2	.0	.0	.0	.0	.0	.0	.0	2.9	2.5
NW	1.2	.8	.5	.2	.0	.0	.0	.0	.0	.0	.0	3.5	2.5
VARBL	1.2	.8	.5	.2	.0	.0	.0	.0	.0	.0	.0	9.0	2.9
CALM	20.6											20.6	
TOT	44.7	26.5	19.3	6.1	1.0	.3	.1	.1	.0	.0	.0	100.0	4.7
TOTAL NUMBER OF OBSERVATIONS											1878		

ELMENDORF AFB, ANCHORAGE, ALASKA

WIND ROSES

MAY

Dir.	Speed in Knots							Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-33		
N	3.6	1.4	2.7	5	1	0	0	9.4	6.9
NE	1.6	1.0	3	0	0	0	0	3.0	4.4
E	1.0	4	6	0	0	0	0	3.8	3.7
SE	1.8	1.6	3	2	0	0	0	3.8	3.9
S	1.2	1.9	1.0	4	1	1	0	3.2	5.3
SW	1.7	2.3	1.7	4	0	0	0	3.1	7.0
WSW	1.1	2.1	2.4	4	0	0	0	2.9	6.1
W	2.2	1.7	1.3	2	1	0	0	2.5	6.0
WNW	1.8	2.6	2.4	6	1	0	0	3.8	6.6
WV	1.4	2.0	2.2	7	1	0	0	4.1	5.5
WIND CALM	16.0							16.0	
TOT	37.6	27.3	25.8	8.2	9	2	0	100.0	5.3
TOTAL NUMBER OF OBSERVATIONS								1000	

JUNE

Dir.	Speed in Knots							Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-33		
N	2.3	2.5	1.1	2	0	0	0	6.1	4.9
NE	1.1	1.0	3.3	1	0	0	0	2.5	4.4
E	1.8	5	1	0	0	0	0	4.3	3.7
SE	1.8	8	3	1	0	0	0	2.9	3.9
S	1.7	1.5	5	2	0	0	0	1.5	5.3
SW	1.6	2.0	1.8	5	1	0	0	3.0	7.0
WSW	1.5	2.3	1.6	4	1	0	0	2.9	6.1
W	1.8	2.5	2.2	4	0	0	0	2.5	6.0
WNW	1.3	2.3	3.0	2	0	0	0	3.8	6.6
W	1.1	2.2	1.9	6	0	0	0	3.8	6.6
WV	1.8	2.7	1.4	4	0	0	0	4.1	5.5
WIND CALM	16.3							16.3	
TOT	39.0	30.1	23.5	6.8	6	1	0	100.0	5.0
TOTAL NUMBER OF OBSERVATIONS								1000	

JULY

Dir.	Speed in Knots							Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-33		
N	3.0	2.8	1.4	2	0	0	0	7.4	4.9
NE	1.7	1.8	1.2	0	0	0	0	2.7	3.6
E	1.8	3	3	0	0	0	0	2.9	3.8
SE	1.6	1.5	1	0	0	0	0	1.4	4.3
S	1.7	1.1	1	2	0	0	0	2.7	6.0
SW	2.0	2.6	1.7	3	1	0	0	3.1	5.4
WSW	1.5	2.3	1.5	4	0	0	0	2.7	5.8
W	2.0	2.4	1.7	3	1	0	0	2.7	6.0
WNW	1.1	2.6	2.5	3	0	0	0	1.7	6.4
W	3.1	2.7	1.4	1	1	0	0	3.2	6.1
WV	2.2	2.8	1.4	2	0	0	0	2.2	5.0
WIND CALM	1.3	2.0	1.3	1	0	0	0	4.7	5.4
TOT	45.0	30.3	20.0	4.2	4	0	0	100.0	4.4
TOTAL NUMBER OF OBSERVATIONS								1000	

AUGUST

Dir.	Speed in Knots							Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-33		
N	3.4	3.7	1.7	2	0	0	0	9.1	4.7
NE	2.4	1.0	1	0	0	0	0	2.8	4.3
E	2.5	1.7	1	0	0	0	0	3.5	3.2
SE	1.9	1.6	1	0	0	0	0	1.7	3.9
S	1.7	1.9	1.8	4	1	0	0	2.8	6.8
SW	1.3	1.8	1.2	7	2	0	0	3.4	5.8
WSW	1.4	1.5	1.8	2	0	0	0	2.8	5.1
W	1.9	1.8	1.3	2	0	0	0	2.0	5.7
WNW	1.1	1.6	1.0	1	0	0	0	3.9	5.3
W	2.3	2.8	1.7	4	0	0	0	2.8	5.4
WV	1.7	2.8	1.5	4	0	0	0	4.2	5.4
WIND CALM	29.9							29.9	
TOT	54.4	28.1	15.4	3.6	5	1	0	100.0	3.8
TOTAL NUMBER OF OBSERVATIONS								1000	

ELMENDORF AFB, ANCHORAGE, ALASKA WIND ROSES

SEPTEMBER

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44			
Dir.	37	49	34	18	11	0	0	0	0	0	0	17.0	6.3
N	39	38	20	10	0	0	0	0	0	0	0	10.7	5.9
NNE	19	14	8	4	0	0	0	0	0	0	0	6.3	3.9
ENE	19	14	8	4	0	0	0	0	0	0	0	6.3	3.9
E	19	14	8	4	0	0	0	0	0	0	0	6.3	3.9
ESE	13	10	6	3	1	0	0	0	0	0	0	2.1	1.1
SE	13	10	6	3	1	0	0	0	0	0	0	2.0	0.9
SSE	13	10	6	3	1	0	0	0	0	0	0	2.0	0.9
S	16	8	4	2	1	0	0	0	0	0	0	3.5	1.9
SSW	17	8	4	2	1	0	0	0	0	0	0	2.5	1.3
SW	14	19	8	4	2	1	0	0	0	0	0	1.7	0.8
WSW	20	24	12	6	3	1	0	0	0	0	0	1.6	0.6
W	19	24	12	6	3	1	0	0	0	0	0	5.8	6.1
WSW	19	24	12	6	3	1	0	0	0	0	0	6.8	6.9
W	20	24	12	6	3	1	0	0	0	0	0	24.7	24.7
WSW	52.2	25.2	14.3	4.1	1.9	0.8	0.4	0.2	0.1	0.0	0.0	100.0	4.2
TOT	TOTAL NUMBER OF OBSERVATIONS											1070	

OCTOBER

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44			
Dir.	37	64	50	32	15	8	0	0	0	0	0	17.0	6.3
N	42	33	17	11	0	0	0	0	0	0	0	10.4	3.9
NNE	24	22	13	7	0	0	0	0	0	0	0	6.4	3.9
ENE	24	22	13	7	0	0	0	0	0	0	0	6.4	3.9
E	10	8	2	1	0	0	0	0	0	0	0	2.1	1.1
ESE	12	12	2	1	0	0	0	0	0	0	0	2.5	1.3
SE	12	12	2	1	0	0	0	0	0	0	0	2.5	1.3
SSE	9	9	2	1	0	0	0	0	0	0	0	2.0	0.9
S	13	6	3	1	0	0	0	0	0	0	0	3.5	1.9
SSW	13	6	3	1	0	0	0	0	0	0	0	2.5	1.3
SW	13	6	3	1	0	0	0	0	0	0	0	1.7	0.8
WSW	14	23	15	8	4	2	1	0	0	0	0	1.6	0.6
W	13	24	12	6	3	1	0	0	0	0	0	5.8	6.1
WSW	13	24	12	6	3	1	0	0	0	0	0	6.8	6.9
W	20	24	12	6	3	1	0	0	0	0	0	24.7	24.7
WSW	52.2	25.2	14.3	4.1	1.9	0.8	0.4	0.2	0.1	0.0	0.0	100.0	4.2
TOT	TOTAL NUMBER OF OBSERVATIONS											1070	

NOVEMBER

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44			
Dir.	47	55	48	17	6	2	1	0	0	0	0	14.7	6.3
N	20	32	20	5	1	0	0	0	0	0	0	10.4	3.9
NNE	29	26	13	7	0	0	0	0	0	0	0	6.4	3.9
ENE	29	26	13	7	0	0	0	0	0	0	0	6.4	3.9
E	14	24	16	11	0	0	0	0	0	0	0	2.5	1.3
ESE	11	9	6	3	1	0	0	0	0	0	0	2.5	1.3
SE	4	5	7	4	3	0	0	0	0	0	0	2.2	1.0
SSE	4	5	7	4	3	0	0	0	0	0	0	2.2	1.0
S	3	4	9	12	0	0	0	0	0	0	0	7.7	4.8
SSW	3	4	9	12	0	0	0	0	0	0	0	4.4	2.8
SW	3	4	9	12	0	0	0	0	0	0	0	4.4	2.8
WSW	4	4	11	11	0	0	0	0	0	0	0	1.1	0.4
W	3	7	7	3	1	0	0	0	0	0	0	4.7	4.7
WSW	4	4	11	11	0	0	0	0	0	0	0	4.7	4.7
W	14	16	18	9	3	1	0	0	0	0	0	5.7	7.6
WSW	23.7	25.1	14.9	5.3	1.6	0.6	0.2	0.1	0.0	0.0	0.0	25.1	25.1
TOT	TOTAL NUMBER OF OBSERVATIONS											100.0	4.0

DECEMBER

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44			
Dir.	42	51	36	14	3	1	0	0	0	0	0	14.7	6.3
N	32	33	17	0	0	0	0	0	0	0	0	10.4	3.9
NNE	42	33	17	0	0	0	0	0	0	0	0	6.4	3.9
ENE	42	33	17	0	0	0	0	0	0	0	0	6.4	3.9
E	11	9	6	3	1	0	0	0	0	0	0	2.5	1.3
ESE	12	12	2	1	0	0	0	0	0	0	0	2.5	1.3
SE	9	9	2	1	0	0	0	0	0	0	0	2.0	0.9
SSE	9	9	2	1	0	0	0	0	0	0	0	2.0	0.9
S	13	6	3	1	0	0	0	0	0	0	0	3.5	1.9
SSW	13	6	3	1	0	0	0	0	0	0	0	2.5	1.3
SW	13	6	3	1	0	0	0	0	0	0	0	1.7	0.8
WSW	14	23	15	8	4	2	1	0	0	0	0	1.6	0.6
W	13	24	12	6	3	1	0	0	0	0	0	5.8	6.1
WSW	13	24	12	6	3	1	0	0	0	0	0	6.8	6.9
W	20	24	12	6	3	1	0	0	0	0	0	24.7	24.7
WSW	52.2	25.2	14.3	4.1	1.9	0.8	0.4	0.2	0.1	0.0	0.0	100.0	4.2
TOT	TOTAL NUMBER OF OBSERVATIONS											100.0	4.0

ANNUAL

Dir.	Speed in Knots										Total	Mean Wind Speed	
	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44			
Dir.	38	48	34	14	3	1	0	0	0	0	0	13.3	6.2
N	22	23	13	1	0	0	0	0	0	0	0	6.1	3.4
NNE	33	24	5	1	0	0	0	0	0	0	0	4.2	3.8
ENE	33	24	5	1	0	0	0	0	0	0	0	4.2	3.8
E	10	18	4	1	0	0	0	0	0	0	0	3.2	3.9
ESE	9	16	2	1	0	0	0	0	0	0	0	3.0	3.4
SE	4	7	4	2	1	0	0	0	0	0	0	2.4	1.7
SSE	4	7	4	2	1	0	0	0	0	0	0	2.4	1.7
S	11	13	10	4	1	0	0	0	0	0	0	4.6	6.8
SSW	10	13	7	2	0	0	0	0	0	0	0	3.1	3.4
SW	10	13	7	2	0	0	0	0	0	0	0	2.8	6.0
WSW	11	11	10	2	0	0	0	0	0	0	0	2.8	6.0
W	12	13	12	2	0	0	0	0	0	0	0	4.4	7.7
WSW	16	23	16	5	1	1	0	0	0	0	0	6.4	7.0
W	14	22	16	7	1	1	0	0	0	0	0	6.4	7.0
WSW	23.7	25.7	17.1	5.3	1.1	0.4	0.1	0.0	0.0	0.0	0.0	23.7	23.7
TOT	TOTAL NUMBER OF OBSERVATIONS											100.0	4.4

CASTLE AFB MERCED, CALIFORNIA (Lat. 37°22'N, Long. 120°34'W, Elev. 198 ft.)

Castle AFB is located in the San Joaquin Valley about six miles northwest of the city of Merced. The San Joaquin Valley is oriented northwest - southeast. It is about 225 miles long with an average width of about 50 miles. Terrain in the vicinity of the airfield is generally level with an abrupt slope about 20 miles northeast where the Sierra Nevada foothills begin. The main crest is about 70 miles to the northeast with elevations from 12,000 - 14,000 feet. The coast range is 50 miles to the southwest with elevations from 2,000 - 5,000 feet, beyond which lies the Pacific Ocean.

The mean annual precipitation is less than 12 inches. The climate is wet and mild in winter while being hot and dry in summer. Most of the precipitation occurs from November to April with practically all the low ceilings and visibilities being confined to these months. Lowest surface visibilities occur under anticyclonic influences when moisture is trapped under a subsidence inversion which forms behind a front. Under these conditions radiation fog will form as soon as surface winds become calm.

From December through March severe icing may be encountered as low as 8,000 feet and in rare cases as low as 5,000 feet, particularly over the mountain areas.

Thunderstorms may occur in any month, with the greatest frequency being in the spring and early fall. Except for the winter months flying conditions are generally quite good.

CASTLE AFB (Cont'd.)

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from January 1942-November 1946 and December 1947-September 1967; with the exception of cloud cover for which data are not available prior to 1946.

CASTLE AFB MERCED, CALIFORNIA

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	53.3	59.6	64.8	72.9	79.6	87.9	95.0	92.4	87.8	78.2	64.3	53.4	74.2
Mean	45.4	50.0	53.9	60.6	66.1	73.0	79.0	76.8	72.9	64.8	53.7	46.2	61.9
Minimum	37.2	40.2	42.6	48.0	52.4	57.8	62.7	60.9	57.8	51.1	43.0	38.8	49.4

Record Temperature Extremes

Maximum	75	77	86	97	105	112	111	107	106	99	89	72
Minimum	20	25	29	34	37	43	50	50	42	32	29	25
	Period of Record: 1942-1966											

MONTHLY MEANS

Precipitation (Inches)

Precipitation	2.01	1.70	1.54	1.34	.45	.07	T	.02	.13	.45	1.27	1.78	10.75
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Snowfall*

T	.0	T	T	.0	.0	.0	.0	.0	.0	.0	.0	.0	T
(*Hail was included in Snowfall Summary prior to January 1956)	Period of Record: Precipitation 1942-1966 Snowfall 1946-1966												

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	SE	NW	NW	NW	NW	NW	NNW	NW	NW	SSE	ESE	SE
Velocity	51	54	44	42	43	40	30	29	42	43	37	47
	Period of Record: 1946, 1948, 1950-1966											

Maximum and/or Minimum Anemometer Height: 105 feet 04/54; 13 feet 04/60

CASTLE AFB, MERCED, CALIFORNIA

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY													FEBRUARY													
Hours	Number of Observations	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	Hours	Number of Observations	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M		
00-02	2,273	15.5	34.9	49.9	37.6	6.0	1.1	8.1	35.9	7.3	44.9	00-02	2,111	5.1	16.4	26.6	54.4	7.7	20.0	5.7	7.7	20.0	5.7	7.7	20.0	5.7
03-05	2,322	20.8	40.7	55.4	35.0	9.7	0.0	9.6	45.1	6.3	49.2	03-05	2,132	9.4	20.3	32.4	48.8	8.7	26.4	5.4	8.7	26.4	5.4	8.7	26.4	5.4
06-08	2,395	23.7	46.4	62.1	25.8	10.8	0.2	10.9	51.2	8.3	56.2	06-08	2,111	12.5	30.1	45.9	36.8	10.1	37.9	8.9	10.1	37.9	8.9	10.1	37.9	8.9
09-11	2,323	13.4	44.9	59.5	22.7	9.3	0.1	9.5	39.9	18.5	55.3	09-11	2,112	4.4	21.5	40.2	34.6	8.4	20.4	18.4	8.4	20.4	18.4	8.4	20.4	18.4
12-14	2,324	1.2	20.4	27.9	23.9	7.7	0.0	7.7	21.2	23.8	43.7	12-14	2,112	3.3	12.3	30.4	33.6	7.0	11.4	16.6	7.0	11.4	16.6	7.0	11.4	16.6
15-17	2,324	1.2	20.4	27.9	23.9	7.7	0.0	7.7	21.2	23.8	43.7	15-17	2,112	3.3	12.3	30.4	33.6	7.0	11.4	16.6	7.0	11.4	16.6	7.0	11.4	16.6
18-20	2,287	3.3	21.2	40.8	37.2	8.2	0.0	8.2	20.5	17.7	36.8	18-20	2,110	1.1	7.5	20.0	44.9	7.5	6.6	10.8	7.5	6.6	10.8	7.5	6.6	10.8
21-23	2,267	9.1	27.3	45.2	40.1	7.9	0.0	8.0	30.9	13.0	40.2	21-23	2,112	2.9	9.5	20.2	53.3	6.6	11.4	8.3	6.6	11.4	8.3	6.6	11.4	8.3
All Hours	18,445	11.2	32.7	50.6	31.3	8.6	0.1	8.7	33.0	14.9	45.5	All Hours	16,890	4.5	15.6	29.6	42.6	7.9	16.8	10.9	7.9	16.8	10.9	7.9	16.8	10.9

MARCH													APRIL													
Hours	Number of Observations	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	Hours	Number of Observations	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M	On-line 3000 ft and/or Visibility < 3 M		
01-02	2,325	3.0	9.0	15.2	55.8	6.4	0.0	6.4	3.5	1.7	5.1	01-02	2,250	7.7	5.7	64.0	5.2	5.2	1.3	5.2	1.3	5.2	1.3	5.2	1.3	
03-05	2,325	1.0	5.3	15.2	55.8	6.0	0.0	6.0	9.9	3.6	12.6	03-05	2,248	4.4	2.2	9.0	62.4	4.2	3.9	2.4	4.2	3.9	2.4	4.2	3.9	
06-08	2,325	2.5	12.3	20.1	43.8	7.1	0.0	7.1	17.2	12.1	26.5	06-08	2,250	8.8	4.0	14.4	50.7	5.1	6.2	7.4	5.1	6.2	7.4	5.1	6.2	
09-11	2,325	1.2	4.6	18.7	39.4	7.2	0.0	7.2	3.4	9.9	13.0	09-11	2,250	1.1	2.8	13.1	46.6	4.1	4.1	5.4	4.1	5.4	5.4	4.1	5.4	
12-14	2,325	1.2	4.6	18.7	39.4	7.2	0.0	7.2	3.4	9.9	13.0	12-14	2,249	1.1	1.3	11.8	41.0	4.4	4.4	1.6	4.4	1.6	4.4	1.6	4.4	
15-17	2,323	1.1	2.5	11.0	36.7	8.4	0.0	8.4	4.8	3.1	4.3	15-17	2,250	1.2	1.3	8.0	40.5	5.4	5.4	1.9	5.4	1.9	5.4	1.9		
18-20	2,325	1.4	8.4	45.4	2.0	7.0	0.0	7.0	7.7	2.7	3.6	18-20	2,250	7.7	5.3	48.1	1.1	5.5	1.8	5.5	1.8	5.5	1.8	5.5	1.8	
21-23	2,324	1.1	6.5	56.2	0.0	6.9	0.0	6.9	1.2	1.3	2.7	21-23	2,250	4.4	4.2	59.9	0.0	5.1	1.1	5.1	1.1	1.1	1.1	1.1	1.1	
All Hours	18,597	5.5	3.9	14.1	46.3	7.0	0.0	7.0	4.7	4.9	9.2	All Hours	17,997	2.2	1.7	8.9	51.6	4.9	4.9	2.5	4.9	2.5	4.9	2.5	4.9	2.5

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

CASTLE AFB, MERCED, CALIFORNIA

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY												
Hours	Number of Observations	Wetness <200 ft and/or Visibility <1/2 MI	Wetness <2000 ft and/or Visibility <1 MI	Wetness <4000 ft and/or Visibility <3 MI	Cloud Cover %/10	Thunder (Wet or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of	Total Occurrences of
											Blowing Snow	Dust (Blowing and/or Suspended)
											Fog	Smoke and/or Haze
00-00	2,310	1.6	75.4	3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
03-05	2,325	5	8.0	70.1	1	2.2	2.2	2.2	2.2	2.2	2.2	2.2
06-08	2,325	5	4.6	61.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
09-11	2,324	1.0	5.3	59.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
12-14	2,324	3	5.1	57.3	0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
15-17	2,324	3	3.5	56.0	2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
18-20	2,325	5	2.8	61.1	1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
21-23	2,323	2	1.4	72.7	2	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All Hours 18,588		4	3.4	64.2	1	2.0	2.0	2.0	2.0	2.0	2.0	2.0
JUNE												
Hours	Number of Observations	Wetness <200 ft and/or Visibility <1/2 MI	Wetness <2000 ft and/or Visibility <1 MI	Wetness <4000 ft and/or Visibility <3 MI	Cloud Cover %/10	Thunder (Wet or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of	Total Occurrences of
											Blowing Snow	Dust (Blowing and/or Suspended)
											Fog	Smoke and/or Haze
00-00	2,320	1.1	90.2	1	7	7	7	7	7	7	7	7
03-05	2,322	2	9	85.5	0	5	5	5	5	5	5	5
06-08	2,322	3	1.6	66.9	4	4	4	4	4	4	4	4
09-11	2,322	1	2.6	70.3	5	5	5	5	5	5	5	5
12-14	2,321	1	1.8	77.5	6	6	6	6	6	6	6	6
15-17	2,322	1	1.1	78.5	1	6	6	6	6	6	6	6
18-20	2,322	2	1.8	70.0	1	4	4	4	4	4	4	4
21-23	2,322	2	2.1	80.1	1	6	6	6	6	6	6	6
All Hours 17,894		1	1.2	68.0	1	5	5	5	5	5	5	5
JULY												
Hours	Number of Observations	Wetness <200 ft and/or Visibility <1/2 MI	Wetness <2000 ft and/or Visibility <1 MI	Wetness <4000 ft and/or Visibility <3 MI	Cloud Cover %/10	Thunder (Wet or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of	Total Occurrences of
											Blowing Snow	Dust (Blowing and/or Suspended)
											Fog	Smoke and/or Haze
00-00	2,325	1	93.0	0	0	0	0	0	0	0	0	0
03-05	2,325	3	91.0	0	0	0	0	0	0	0	0	0
06-08	2,325	7	87.4	0	2	2	2	2	2	2	2	2
09-11	2,325	6	88.1	1	1	1	1	1	1	1	1	1
12-14	2,325	3	87.8	0	2	2	2	2	2	2	2	2
15-17	2,325	3	86.7	0	0	0	0	0	0	0	0	0
18-20	2,325	6	86.7	0	0	0	0	0	0	0	0	0
21-23	2,324	3	91.5	0	1	1	1	1	1	1	1	1
All Hours 18,599		0	4	89.0	0	1	1	1	1	1	1	1
AUGUST												
Hours	Number of Observations	Wetness <200 ft and/or Visibility <1/2 MI	Wetness <2000 ft and/or Visibility <1 MI	Wetness <4000 ft and/or Visibility <3 MI	Cloud Cover %/10	Thunder (Wet or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of	Total Occurrences of
											Blowing Snow	Dust (Blowing and/or Suspended)
											Fog	Smoke and/or Haze
00-00	2,324	2	91.7	1	0	0	0	0	0	0	0	0
03-05	2,325	2	90.3	1	1	1	1	1	1	1	1	1
06-08	2,325	1	1.9	86.1	3	3	3	3	3	3	3	3
09-11	2,325	4	86.9	2	2	2	2	2	2	2	2	2
12-14	2,324	1	87.0	2	2	2	2	2	2	2	2	2
15-17	2,324	2	89.3	2	2	2	2	2	2	2	2	2
18-20	2,325	2	83.3	2	2	2	2	2	2	2	2	2
21-23	2,325	1	91.6	0	0	0	0	0	0	0	0	0
All Hours 18,597		0	4	88.2	0	1	1	1	1	1	1	1

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

... indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

CASTLE AFB, MERCED, CALIFORNIA

Percentage Frequencies of Occurrence of Specified Weather Conditions

OCTOBER														NOVEMBER														DECEMBER														SEPTEMBER														ANNUAL																																																																																																																																																								
Hours	Number of Observations	Winds 1200 Ft and/or Visibility < 1 1/2 MI	Winds 1000 Ft and/or Visibility < 3 MI	Winds 800 Ft and/or Visibility < 5 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Data (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Winds 1200 Ft and/or Visibility < 1 1/2 MI	Winds 1000 Ft and/or Visibility < 3 MI	Winds 800 Ft and/or Visibility < 5 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Data (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Winds 1200 Ft and/or Visibility < 1 1/2 MI	Winds 1000 Ft and/or Visibility < 3 MI	Winds 800 Ft and/or Visibility < 5 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Data (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision																																																																																																																																																														
00-02	2,899	.2	.8	31.2	.2	.66	.2	1.1	1.2	00-02	2,830	.4	2.9	10.8	83.8	.0	1.3	1.3	.4	5.7	1.3	03-05	2,890	.5	2.4	86.8	.1	.77	.9	2.6	3.2	06-08	2,890	.1	.9	13.6	81.4	.1	.66	.5	17.2	1.9	09-11	2,849	.3	6.4	81.17	.4	10.23	10.8	19-11	2,831	.2	4.5	28.0	66.7	1.1	1.7	13-14	2,890	.2	3.3	80.711	3.5	15-17	2,890	.3	2.6	79.9	.1	.33	.1	3.95	4.5	18-20	2,849	.3	2.5	88.9	.2	.44	.1	4.26	4.9	21-23	2,848	.8	89.02	.77	1.7	All Hours 17,995	.0	.3	4.1	84.4	.1	.55	.7	5.72	6.4	All Hours 17,852	.4	3.6	15.1	74.7	.1	1.6	1.6	4.3	16.17	20.1

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.30 percent of the time.

.... indicates that the condition has occurred exactly 0.00 percent of the time. A blank indicates that the data are not available.

CASTLE AFB, MERCED, CALIFORNIA WIND ROSES

JANUARY

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.7	1.6	1.3	3	1	0	2.0
NE	0.8	0.7	2	1	0	0	1.6
E	0.8	0.7	2	1	0	0	1.6
ESE	1.4	1.4	1.1	0	0	0	1.9
SE	1.6	2.1	1.5	1	0	0	2.4
SSE	0.6	3.9	3.6	1.9	3	1	13.5
S	1.7	2.8	1.0	1	0	0	5.1
SSW	0.7	0.6	3	0	0	0	3.7
SW	1.0	1.6	3	1	0	0	4.7
WSW	1.4	1.6	2	0	0	0	3.9
W	1.4	2.3	3.1	1.1	2	1	8.5
WNW	1.1	1.8	2.4	1.0	2	1	6.7
WV	31.0						31.0
TOT	50.0	22.2	17.5	6.7	2.4	1.0	100.0
TOTAL NUMBER OF OBSERVATIONS							1593A

FEBRUARY

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.7	0.6	0.4	0	0	0	1.7
NE	0.8	0.7	3	0	0	0	1.6
E	0.8	0.7	3	0	0	0	1.6
ESE	1.4	1.4	1.7	1	0	0	3.5
SE	1.4	2.0	1.6	1.9	1	1	6.4
SSE	1.0	1.5	1.4	1.6	2	1	4.9
S	1.3	1.8	0.9	1	0	0	4.2
SSW	0.6	0.6	1	1	0	0	3.9
SW	1.4	1.3	3	1	0	0	5.4
WSW	1.7	1.3	3	1	0	0	6.7
W	1.2	2.0	3.7	1.9	2	1	10.5
WNW	1.1	2.4	3.1	1.5	2	0	8.7
WV	29.0						29.0
TOT	45.8	20.0	20.2	6.0	2.6	1.1	100.0
TOTAL NUMBER OF OBSERVATIONS							1693

MARCH

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	2.2	3.8	4.1	1.3	2	1	11.7
NE	0.9	0.6	2	1	0	0	4.7
E	1.3	0.3	1.1	0	0	0	2.8
ESE	1.1	1.5	1.1	3	1	0	4.3
SE	2.0	2.0	1.3	6	2	1	10.8
SSE	0.9	1.0	1.7	2	1	0	6.7
S	1.0	1.0	1.2	1	0	0	2.9
SSW	0.5	1.2	1.1	0	0	0	3.3
SW	1.4	1.6	4	1	0	0	7.8
WSW	1.0	1.7	1	1	0	0	5.5
W	1.3	3.3	5.0	2.5	1.6	2	13.0
WNW	1.3	3.8	6.1	3.4	1.8	1	16.0
WV	21.5						21.5
TOT	37.0	23.1	24.9	10.8	2.8	1.0	100.0
TOTAL NUMBER OF OBSERVATIONS							1599B

APRIL

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.8	3.8	6.1	1.9	1.8	0	13.7
NE	0.5	1.4	1	1	0	0	4.8
E	0.3	0.2	1	0	0	0	1.9
ESE	0.5	0.7	1.4	1.8	0	0	3.9
SE	0.9	1.6	1.3	1.6	2	0	6.1
SSE	0.7	0.9	0.5	1.4	1	0	2.7
S	1.4	1.7	3	1	0	0	6.8
SSW	0.4	0.6	0.3	1	0	0	2.4
SW	1.0	1.2	1.8	1.1	0	0	5.1
WSW	1.4	1.6	1.5	1.1	0	0	6.1
W	1.0	1.2	1.8	1.1	0	0	5.1
WNW	1.6	1.6	1.7	3.5	1.0	2	8.8
WV	1.5	5.5	10.2	5.1	1.9	4	23.6
WV	14.1						14.1
TOT	27.0	24.4	31.7	13.1	2.8	0.1	100.0
TOTAL NUMBER OF OBSERVATIONS							1797

VANDENBERG AFB, SANTA MARIA, CALIFORNIA (Lat. 34°44'N, Long. 120°34'W, Elev. 378 ft.)

Vandenberg AFB is located on a flat, sandy, brush-covered plain 17 miles south-southwest of Santa Maria, California. The plain slopes gently toward the Pacific Coast three miles to the west, while inland the plain is surrounded by a series of ridges and valleys. One ridge, 12 miles to the south reaches a height of 2100 feet.

Most meteorological parameters reflect the seasonal as well as the diurnal variations in Vandenberg's weather conditions. During the dry season, May through October, most days are clear in the afternoon hours; however, under the influence of the semipermanent Pacific High, considerable advective and radiational cooling results in the frequent nocturnal occurrence of low stratus clouds and early morning fog. Low ceilings and visibilities occur with less frequency during the wet season, November through April, despite the fact that 90% of the average annual precipitation falls within this period.

Thundershowers are infrequent with most occurring during September when cyclonic activity begins to increase and the instability in the lower levels is at a maximum. Even more infrequent is the occurrence of hail in these thundershowers.

Unequal heating of land and sea surfaces combined with the circulation of the Pacific High, act to provide on-shore winds during most of the daytime hours, while at the same time keeping the station relatively free of industrial pollutants which would otherwise reduce visibilities.

The following data, except for the Temperature and Precipitation

VANDENBERG AFB Cont'd.)

Summary, are based on twenty-four hourly observations from July 1951-December 1952 and June 1958-August 1967.

VANDENBERG AFB SANTA MARIA, CALIFORNIA

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	60.7	60.4	59.4	61.1	59.8	62.7	64.0	65.8	67.2	68.4	64.4	61.8	63.1
Mean	52.2	52.6	52.3	54.2	53.9	56.8	58.4	59.8	60.2	60.1	55.8	53.1	55.9
Minimum	43.2	44.2	44.7	46.8	47.5	50.4	52.3	53.4	52.7	51.3	46.8	43.8	48.1

Record Temperature Extremes

Maximum	78	78	79	88	74	76	85	96	92	99	83	87
Minimum	30	31	31	36	37	41	45	45	43	35	32	30
	Period of Record: 1951-1952, 1958-1965											

MONTHLY MEANS

Precipitation	Precipitation (Inches)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Precipitation	2.16	2.60	2.25	1.25	.11	.03	.01	.05	.20	.61	2.06	1.37	12.69
Snowfall*	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2
	(*Hail was included in Snowfall Summary prior to January 1956)												
	Period of Record: Precipitation 1952, 1958-1965 Snowfall 1952, 1957-1965												

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	SW	WNW	SE	WNW	NW	WNW	NW	NNW	NW	NW	SE	SE
Velocity	36	32	40	34	35	32	28	25	25	30	35	32
	Period of Record: 1963-1965											

Maximum and/or Minimum Anemometer Height: 13 feet 10/60

VANDENBERG AFB, SANTA MARIA, CALIFORNIA

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY														FEBRUARY																				
Hours	Number of Observations	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Observations to Vision	Hours	Number of Observations	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Observations to Vision	
00-00	836	4.3	15.0	20.6	59.0	...	7.1	...	...	...	6.1	11.5	...	...	...	10.6	00-00	762	6.2	19.3	27.4	54.1	1.1	7.1	...	...	...	7.1	13.7	...	...	...	14.2	
03-05	837	2.6	14.5	21.5	55.0	...	5.7	...	...	...	5.3	11.4	...	...	...	11.4	03-05	762	5.0	19.7	25.5	53.0	...	...	...	...	...	6.3	13.0	...	...	...	13.0	
06-08	837	2.1	13.0	23.2	66.0	...	5.3	...	...	...	5.7	9.9	...	...	...	10.3	06-08	771	4.8	19.2	29.1	50.1	...	...	...	...	...	5.3	12.0	...	...	...	12.6	
09-11	936	...	...	...	...	...	5.2	...	...	...	5.0	5.7	...	...	...	7.5	09-11	869	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.3
12-14	930	...	...	...	...	...	5.3	...	...	...	5.3	4.5	...	...	...	7.0	12-14	849	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.5
15-17	899	...	...	...	...	...	5.7	...	...	...	5.7	4.9	...	...	...	8.1	15-17	720	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.1
18-20	837	...	...	...	...	...	6.3	...	...	...	6.5	8.8	...	...	...	11.0	18-20	762	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.4
21-23	836	...	...	...	...	...	6.8	...	...	...	6.8	9.7	...	...	...	10.5	21-23	762	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15.5
All Hours	6,973	2.5	13.7	21.5	60.1	...	5.8	...	...	...	5.8	8.1	...	...	...	9.5	All Hours	6,377	3.6	15.6	23.0	47.5	...	...	...	...	...	...	...	...	...	...	...	13.4

MARCH														APRIL																									
Hours	Number of Observations	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Observations to Vision	Hours	Number of Observations	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Observations to Vision						
00-00	836	7.9	26.8	35.5	44.4	...	6.7	...	...	...	6.7	15.1	...	...	...	15.9	00-00	810	6.5	33.3	32.0	34.9	1.1	6.4	...	...	...	...	...	...	...	...	...	...	...	...
03-05	837	9.2	29.7	36.6	44.8	...	4.8	4.8	19.7	20.2	03-05	810	12.0	37.0	46.3	37.3	
06-08	860	7.9	28.6	33.6	36.0	...	4.0	4.0	16.7	16.8	06-08	844	7.3	33.4	34.8	35.9
09-11	730	...	...	...	...	...	4.7	...	...	...	4.7	8.6	...	...	...	9.4	09-11	799	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12-14	936	...	...	...	...	...	4.2	...	...	...	4.2	5.6	...	...	...	7.7	12-14	900	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15-17	897	...	...	...	...	...	4.6	...	...	...	4.6	7.2	...	...	...	10.0	15-17	866	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18-20	837	...	...	...	...	...	4.3	...	...	...	4.3	11.4	...	...	...	12.4	18-20	810	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21-23	837	...	...	...	...	...	6.0	...	...	...	6.0	10.9	...	...	...	13.5	21-23	810	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All Hours	6,968	4.6	20.9	27.0	34.9	...	4.9	4.9	10.1	13.1	All Hours	6,779	4.5	26.1	25.1	31.1	

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

... indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

VANDENBERG AFB, SANTA MARIA, CALIFORNIA

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY													JUNE												
Hours	Number of Observations	Clouds < 100 Ft and/or Visibility < 1.0 Mi	Clouds < 200 Ft and/or Visibility < 2.0 Mi	Clouds < 400 Ft and/or Visibility < 4.0 Mi	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision										
00-02	837	13.5	51.5	80.1	34.3	7.3	26.5	6	27.1	7.3	26.5	6	27.1	27.1	27.1										
02-04	837	17.6	55.6	82.7	30.2	7.3	33.3	8	31.9	7.3	33.3	8	31.9	31.9	31.9										
04-06	599	11.7	56.5	81.7	28.4	4.2	37.3	2.1	35.6	4.2	37.3	2.1	35.6	35.6	35.6										
06-08	936	8	33.8	46.9	46.3	1.1	16.8	2.3	18.2	1.1	16.8	2.3	18.2	18.2	18.2										
08-10	1244	8	23.7	39.6	46.0	2	7.5	3.2	9.6	2	7.5	3.2	9.6	9.6	9.6										
10-12	969	5	38.8	35.9	11.0	7	11.1	4.3	13.4	7	11.1	4.3	13.4	13.4	13.4										
12-14	837	4.3	28.2	41.1	34.7	1.2	10.1	3.6	21.4	1.2	10.1	3.6	21.4	21.4	21.4										
14-16	837	7.8	42.7	55.5	39.9	4.7	20.2	2.9	22.7	4.7	20.2	2.9	22.7	22.7	22.7										
All Hours	6,975	6.9	41.6	48.3	37.1	3.1	21.2	2.6	28.2	3.1	21.2	2.6	28.2	28.2	28.2										

JULY													AUGUST												
Hours	Number of Observations	Clouds < 100 Ft and/or Visibility < 1.0 Mi	Clouds < 200 Ft and/or Visibility < 2.0 Mi	Clouds < 400 Ft and/or Visibility < 4.0 Mi	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision										
00-02	936	46.0	75.9	81.5	17.8	10.3	10.3	10.3	10.3	10.3	65.9	6	6	6	65.9										
02-04	936	52.9	86.2	88.3	11.2	17.6	17.6	17.6	17.6	17.6	77.1	1	1	1	77.1										
04-06	1,079	33.5	84.3	95.5	11.1	11.3	11.3	11.3	11.3	11.3	74.8	1.3	1.3	1.3	74.8										
06-08	1,079	21	51.0	55.5	5.1	1.1	1.1	1.1	1.1	1.1	31.3	5.8	5.8	5.8	31.3										
08-10	1,277	22.4	27.5	31.1	58.1	1.1	1.1	1.1	1.1	1.1	7.9	4.1	4.1	4.1	7.9										
10-12	969	11.4	45.3	46.7	33.4	5	5	5	5	5	16.1	4.6	4.6	4.6	16.1										
12-14	837	3.8	16.5	67.1	29.5	1.6	1.6	1.6	1.6	1.6	10.5	3.3	3.3	3.3	10.5										
14-16	837	5.8	25.6	71.1	23.5	5.5	5.5	5.5	5.5	5.5	58.2	1.6	1.6	1.6	58.2										
All Hours	5,004	21.5	63.2	65.2	27.4	6.9	6.9	6.9	6.9	6.9	46.1	2.6	2.6	2.6	46.1										

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 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

VANDENBERG AFB, SANTA MARIA, CALIFORNIA

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER														OCTOBER													
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 MI	Cellings <2000 Ft and/or Visibility <1/2 MI	Cellings <4000 Ft and/or Visibility <3/4 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SMI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision											
00-02	800	24.3	54.9	59.3	56.9	4	5.3	....	....	....	5.3	43.8	....	....	....	43.8					
03-05	810	34.2	63.3	66.1	62.3	4	0.8	....	....	....	9.7	21.1	....	....	....	51.1					
06-08	755	29.0	65.1	69.5	75.5	4	7.2	....	....	....	7.2	59.9	....	....	....	58.6					
09-11	906	4.6	46.1	45.6	44.0	3	0.0	....	....	....	0.3	26.8	....	....	....	30.9					
12-14	989	4	24.2	28.6	37.7	2	1.1	....	....	....	1.1	12.6	....	....	....	14.9					
15-17	873	8	32.8	36.4	40.5	....	2.6	....	....	....	2.6	12.7	....	....	....	17.6				
18-20	896	9.1	44.2	47.8	44.3	1	1.2	....	....	....	1.2	25.8	....	....	....	28.0					
21-23	818	15.8	48.1	51.0	42.6	1	2.5	....	....	....	2.5	34.8	....	....	....	39.3					
All Hours	7,683	34.3	46.1	50.4	44.4	2	3.5	....	....	....	3.5	32.0	....	....	....	34.8					

NOVEMBER														DECEMBER													
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 MI	Cellings <2000 Ft and/or Visibility <1/2 MI	Cellings <4000 Ft and/or Visibility <3/4 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SMI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision											
00-02	800	7.3	23.8	31.7	34.6	1	5.1	....	....	....	5.1	17.1	....	....	....	18.0					
03-05	810	6.3	21.4	29.3	35.2	....	5.8	....	....	....	5.8	16.7	....	....	....	18.1				
06-08	874	7.1	22.2	31.8	47.1	....	7.1	....	....	....	7.1	21.1	....	....	....	23.2				
09-11	977	7	15.3	24.9	15.4	....	5.4	....	....	....	5.4	9.1	....	....	....	15.5				
12-14	907	3	11.3	22.0	35.4	1	5.8	....	....	....	5.8	6.1	....	....	....	12.2					
15-17	936	4.8	15.3	23.7	42.6	....	4.5	....	....	....	4.5	8.9	....	....	....	14.0				
18-20	890	4.2	20.4	27.8	47.7	....	5.7	....	....	....	5.7	15.8	....	....	....	18.3				
21-23	810	7.0	22.7	36.9	53.2	....	5.3	....	....	....	5.3	17.3	....	....	....	18.8				
All Hours	7,612	4.0	18.7	27.5	42.9	1	5.5	....	....	....	5.5	13.7	....	....	....	17.1					

ANNUAL																
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 MI	Cellings <2000 Ft and/or Visibility <1/2 MI	Cellings <4000 Ft and/or Visibility <3/4 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SMI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
All Hours	86,070	9.8	35.0	41.4	46.9	0	5.0	....	....	....	5.0	23.4	....	....	....	29.5

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

VANDENBERG AFB, SANTA MARIA, CALIFORNIA WIND ROSES

MAY

JUNE

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.6	2.1	1.7	0	0	6.7	6.6
NE	0	0	0	0	0	1.2	1.1
E	0	0	0	0	0	1.3	1.1
ESE	0	0	0	0	0	1.0	1.1
SE	0	0	0	0	0	1.6	1.4
SSE	0	0	0	0	0	1.4	1.6
S	0	0	0	0	0	1.8	1.9
SSW	0	0	0	0	0	1.8	2.0
SW	0	0	0	0	0	1.1	1.7
WSW	0	0	0	0	0	1.1	1.6
W	1.6	2.1	2.0	1.4	0	9.2	6.7
WNW	1.9	6.7	10.7	9.1	1.4	28.8	10.6
WV	1.9	4.4	7.0	6.1	1.0	22.8	10.6
WV CALM	0	0	0	0	0	0	0
TOT	24.3	21.8	26.1	18.9	2.3	100.0	7.9

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.3	1.9	1.6	0	0	4.1	5.1
NE	0	0	0	0	0	1.2	1.1
E	0	0	0	0	0	1.6	1.3
ESE	0	0	0	0	0	1.7	1.3
SE	0	0	0	0	0	1.4	1.4
SSE	0	0	0	0	0	1.4	1.4
S	0	0	0	0	0	1.4	1.5
SSW	0	0	0	0	0	1.4	1.5
SW	1.0	3.7	2.2	1.3	0	6.4	6.5
WSW	1.0	3.7	2.2	1.3	0	6.4	6.5
W	2.5	7.2	13.3	7.3	1.8	32.1	12.4
WNW	1.8	4.5	6.7	2.5	1.4	16.1	7.9
WV	0	0	0	0	0	0	0
WV CALM	0	0	0	0	0	0	0
TOT	31.6	23.3	29.5	12.3	2.4	100.0	6.2

TOTAL NUMBER OF OBSERVATIONS 5973

TOTAL NUMBER OF OBSERVATIONS 7133

JULY

AUGUST

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.6	2.1	1.7	0	0	4.5	4.3
NE	0	0	0	0	0	1.6	1.6
E	0	0	0	0	0	1.1	2.7
ESE	0	0	0	0	0	1.5	3.7
SE	0	0	0	0	0	1.5	3.3
SSE	0	0	0	0	0	1.2	3.0
S	0	0	0	0	0	1.1	3.1
SSW	0	0	0	0	0	1.2	2.7
SW	0	0	0	0	0	1.7	5.7
WSW	0	0	0	0	0	1.0	6.4
W	1.0	3.7	4.5	1.9	0	31.0	7.5
WNW	3.5	10.2	12.0	4.9	1.1	33.2	6.3
WV	2.2	5.6	4.1	1.1	1.1	25.4	6.4
WV CALM	0	0	0	0	0	0	0
TOT	36.1	28.2	29.9	7.4	1.5	100.0	6.9

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	2.0	2.0	1.5	0	0	4.7	4.3
NE	0	0	0	0	0	1.4	1.4
E	0	0	0	0	0	1.4	2.8
ESE	0	0	0	0	0	1.7	1.0
SE	0	0	0	0	0	1.8	2.9
SSE	0	0	0	0	0	1.2	2.1
S	0	0	0	0	0	1.4	3.9
SSW	0	0	0	0	0	1.7	6.2
SW	1.4	4.6	1.6	0	0	8.2	6.6
WSW	1.4	4.6	1.6	0	0	8.2	6.6
W	1.0	3.7	4.4	0	0	10.3	5.8
WNW	3.8	9.9	12.6	4.5	1.2	11.8	6.0
WV	2.2	5.3	3.5	0	0	27.0	6.7
WV CALM	0	0	0	0	0	0	0
TOT	40.9	26.5	25.4	6.9	1.3	100.0	6.7

TOTAL NUMBER OF OBSERVATIONS 1004

TOTAL NUMBER OF OBSERVATIONS 2824

VANDENBERG AFB, SANTA MARIA, CALIFORNIA WIND ROSES

SEPTEMBER

Dir.	Speed in Knots					Total	Mean Speed
	7-10	11-15	16-20	21-25	26-33		
K	2.1	2.1	2.1	2.1	2.1	10.5	2.5
NE	1.7	1.4	1.1	1.0	1.0	5.2	1.3
E	1.4	1.1	1.0	1.0	1.0	5.5	1.4
ENE	1.4	1.1	1.0	1.0	1.0	5.5	1.4
ESE	1.2	1.1	1.1	1.1	1.1	5.6	1.4
SE	1.3	1.3	1.3	1.3	1.3	6.5	1.6
SSE	1.3	1.3	1.3	1.3	1.3	6.5	1.6
S	1.3	1.3	1.3	1.3	1.3	6.5	1.6
SSW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
SW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
WSW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
W	1.3	1.3	1.3	1.3	1.3	6.5	1.6
WNW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
NW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
NNW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
N	1.3	1.3	1.3	1.3	1.3	6.5	1.6
VARBL	1.7	1.7	1.7	1.7	1.7	8.6	2.1
CALC	27.4					27.4	
TOT	41.9	25.1	22.5	1.3	1.4	106.0	5.0

TOTAL NUMBER OF OBSERVATIONS: 7940

TOT 28.2

TOTAL NUMBER OF OBSERVATIONS: 7251

OCTOBER

Dir.	Speed in Knots					Total	Mean Speed
	7-10	11-15	16-20	21-25	26-33		
K	1.7	1.7	1.7	1.7	1.7	8.6	2.1
NE	1.7	1.7	1.7	1.7	1.7	8.6	2.1
E	1.7	1.7	1.7	1.7	1.7	8.6	2.1
ENE	2.0	2.0	2.0	2.0	2.0	10.0	2.5
ESE	2.0	2.0	2.0	2.0	2.0	10.0	2.5
SE	1.5	1.5	1.5	1.5	1.5	7.5	1.9
SSE	1.5	1.5	1.5	1.5	1.5	7.5	1.9
S	1.5	1.5	1.5	1.5	1.5	7.5	1.9
SSW	1.5	1.5	1.5	1.5	1.5	7.5	1.9
SW	1.5	1.5	1.5	1.5	1.5	7.5	1.9
WSW	1.5	1.5	1.5	1.5	1.5	7.5	1.9
W	1.5	1.5	1.5	1.5	1.5	7.5	1.9
WNW	1.5	1.5	1.5	1.5	1.5	7.5	1.9
NW	1.5	1.5	1.5	1.5	1.5	7.5	1.9
NNW	1.5	1.5	1.5	1.5	1.5	7.5	1.9
N	1.5	1.5	1.5	1.5	1.5	7.5	1.9
VARBL	1.5	1.5	1.5	1.5	1.5	7.5	1.9
CALC	28.2					28.2	
TOT	39.6	27.1	21.7	8.0	1.7	138.1	5.3

TOTAL NUMBER OF OBSERVATIONS: 7940

TOTAL NUMBER OF OBSERVATIONS: 7251

NOVEMBER

Dir.	Speed in Knots					Total	Mean Speed
	7-10	11-15	16-20	21-25	26-33		
K	2.9	2.9	2.9	2.9	2.9	14.5	3.6
NE	1.6	1.1	1.0	1.0	1.0	5.7	1.4
E	1.6	1.1	1.0	1.0	1.0	5.7	1.4
ENE	2.5	2.5	2.5	2.5	2.5	12.5	3.1
ESE	2.5	2.5	2.5	2.5	2.5	12.5	3.1
SE	1.6	1.6	1.6	1.6	1.6	8.0	2.0
SSE	1.6	1.6	1.6	1.6	1.6	8.0	2.0
S	1.6	1.6	1.6	1.6	1.6	8.0	2.0
SSW	1.6	1.6	1.6	1.6	1.6	8.0	2.0
SW	1.6	1.6	1.6	1.6	1.6	8.0	2.0
WSW	1.6	1.6	1.6	1.6	1.6	8.0	2.0
W	1.6	1.6	1.6	1.6	1.6	8.0	2.0
WNW	1.6	1.6	1.6	1.6	1.6	8.0	2.0
NW	1.6	1.6	1.6	1.6	1.6	8.0	2.0
NNW	1.6	1.6	1.6	1.6	1.6	8.0	2.0
N	1.6	1.6	1.6	1.6	1.6	8.0	2.0
VARBL	1.7	1.7	1.7	1.7	1.7	8.6	2.1
CALC	15.7					15.7	
TOT	33.2	28.3	28.1	11.5	2.2	106.0	5.9

TOTAL NUMBER OF OBSERVATIONS: 7940

TOTAL NUMBER OF OBSERVATIONS: 7251

DECEMBER

Dir.	Speed in Knots					Total	Mean Speed
	7-10	11-15	16-20	21-25	26-33		
K	1.4	1.4	1.4	1.4	1.4	7.0	1.8
NE	1.0	1.0	1.0	1.0	1.0	5.0	1.3
E	1.0	1.0	1.0	1.0	1.0	5.0	1.3
ENE	2.0	2.0	2.0	2.0	2.0	10.0	2.5
ESE	2.0	2.0	2.0	2.0	2.0	10.0	2.5
SE	1.4	1.4	1.4	1.4	1.4	7.0	1.8
SSE	1.4	1.4	1.4	1.4	1.4	7.0	1.8
S	1.4	1.4	1.4	1.4	1.4	7.0	1.8
SSW	1.4	1.4	1.4	1.4	1.4	7.0	1.8
SW	1.4	1.4	1.4	1.4	1.4	7.0	1.8
WSW	1.4	1.4	1.4	1.4	1.4	7.0	1.8
W	1.4	1.4	1.4	1.4	1.4	7.0	1.8
WNW	1.4	1.4	1.4	1.4	1.4	7.0	1.8
NW	1.4	1.4	1.4	1.4	1.4	7.0	1.8
NNW	1.4	1.4	1.4	1.4	1.4	7.0	1.8
N	1.4	1.4	1.4	1.4	1.4	7.0	1.8
VARBL	1.4	1.4	1.4	1.4	1.4	7.0	1.8
CALC	16.9					16.9	
TOT	33.1	32.2	21.6	9.2	1.4	138.1	5.6

TOTAL NUMBER OF OBSERVATIONS: 7940

TOTAL NUMBER OF OBSERVATIONS: 7251

ANNUAL

Dir.	Speed in Knots					Total	Mean Speed
	7-10	11-15	16-20	21-25	26-33		
K	1.6	2.5	1.8	1.9	1.8	10.6	2.7
NE	1.7	1.6	1.5	1.5	1.5	7.8	2.0
E	1.6	1.5	1.4	1.4	1.4	7.5	1.9
ENE	1.8	1.7	1.7	1.7	1.7	8.6	2.1
ESE	1.8	1.7	1.7	1.7	1.7	8.6	2.1
SE	1.3	1.3	1.3	1.3	1.3	6.5	1.6
SSE	1.3	1.3	1.3	1.3	1.3	6.5	1.6
S	1.3	1.3	1.3	1.3	1.3	6.5	1.6
SSW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
SW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
WSW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
W	1.3	1.3	1.3	1.3	1.3	6.5	1.6
WNW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
NW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
NNW	1.3	1.3	1.3	1.3	1.3	6.5	1.6
N	1.3	1.3	1.3	1.3	1.3	6.5	1.6
VARBL	1.7	1.7	1.7	1.7	1.7	8.6	2.1
CALC	19.3					19.3	
TOT	32.4	26.6	25.3	11.3	1.6	100.0	6.1

TOTAL NUMBER OF OBSERVATIONS: 8666

McCOY AFB ORLANDO, FLORIDA (Lat. 28°27'N, Long. 81°18'W, Elev. 95 ft.)

Within a 30 nautical mile radius of McCoy AFB there are numerous lakes, grassy marshlands and citrus groves. The prevailing terrain averages 50 - 150 feet, with the highest point, 325 feet, at Iron Mountain, 35 nautical miles to the south-southwest.

Essentially, there are two seasons in central Florida, winter and summer. Spring and fall are transition periods of short duration. From late November to early March, weather related flight restrictions are generally due to light precipitation, early morning fog and/or stratus. The fog and/or stratus will usually lift within two or three hours after sunrise.

During spring and fall, which are rather brief, frontal weather associated with pronounced air mass discontinuities can trigger some intense thunderstorm activity with accompanying gusty winds and widespread low cloud conditions. This section of Florida has the highest frequency of thunderstorm occurrences in North America. Thunderstorms occur in all months, but are principally confined to the summer season, May to late September. Hail seldom occurs with air-mass thunderstorms, but occurrence is always possible in squall line thunderstorms.

In the fall and winter general use of smudge pots in the citrus grove and the burning of underbrush act to reduce surface visibilities, particularly in the early morning hours.

Generally at least one tropical storm or hurricane will affect the Orlando area every two years.

McCOY AFB (Cont'd.)

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from January 1944-February 1946, September-October 1946 and May 1952-November 1967; with the exception of cloud cover for which data are not available prior to 1946.

McCOY AFB ORLANDO, FLORIDA

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	69.6	73.0	76.6	81.7	86.8	89.2	89.9	90.0	88.0	82.0	76.3	70.5	81.2
Mean	59.6	63.0	66.7	71.8	76.7	80.4	81.8	81.9	80.3	74.0	67.0	60.6	72.1
Minimum	49.2	52.6	56.3	61.5	66.3	71.2	73.1	73.5	72.3	65.5	57.3	50.2	62.6

Record Temperature Extremes

Maximum	86	89	91	96	101	100	98	97	96	92	88	85
Minimum	24	29	34	36	44	59	67	65	60	45	30	21
							Period of Record: 1944-1946, 1952-1966					

MONTHLY MEANS

Precipitation (Inches)

Precipitation	2.33	2.51	3.59	2.30	2.53	7.12	7.22	5.66	6.14	3.54	1.48	1.72	46.14
Snowfall*	T	.0	.0	T	.0	.0	.0	.0	.0	.0	.0	.0	T
	(*Hail was included in Snowfall Summary prior to January 1956)												
	Period of Record: Precipitation 1944-1946, 1952-1966 Snowfall 1946, 1952-1966												

Surface Winds (Knots) - Record Peak Gusts

Wind Direction Velocity	N	W	NW	NNE	E	SW	N	SW	NW	W	WNW	
	38	48	50	36	44	41	44	43	34	32	31	
	Period of Record: 1956-1962, 1964-1966											

Maximum and/or Minimum Anemometer Height: 100 feet 04/53; 13 feet 04/57

McCOY AFB, ORLANDO, FLORIDA

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY														FEBRUARY																			
Hour	Number of Observations	Clouds < 200 Ft and/or Visibility < 3 MI	Clouds < 1000 Ft and/or Visibility < 5 MI	Clouds < 4000 Ft and/or Visibility < 6 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Show and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Clouds < 200 Ft and/or Visibility < 3 MI	Clouds < 1000 Ft and/or Visibility < 5 MI	Clouds < 4000 Ft and/or Visibility < 6 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Show and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,653	2.7	14.1	26.7	53.3	....	6.4	12.2	9.0	....	19.7	....	....	....	....	19.7	06-08	1,482	2.3	13.6	26.6	51.4	.4	5.7	....	....	....	....	5.7	11.9	8.2	....	19.0
03-05	1,653	6.9	28.6	37.2	46.1	.1	5.6	22.7	8.5	....	28.6	....	....	....	....	28.6	09-05	1,482	4.5	22.4	35.3	50.3	.3	6.0	....	....	....	....	6.0	22.3	8.4	....	28.1
06-08	1,653	9.3	27.5	44.3	38.4	.1	6.7	29.4	10.3	....	36.0	....	....	....	....	36.0	06-06	1,482	8.0	30.3	44.9	38.2	.3	6.7	....	....	....	....	6.7	29.0	9.8	....	34.8
09-11	1,656	3.5	16.1	31.0	37.8	.2	5.2	....	....	....	20.9	....	....	....	....	20.9	09-11	1,482	1.0	19.6	33.9	34.8	.1	5.6	....	....	....	....	5.6	9.7	11.1	....	19.6
12-14	1,656	....	8.9	24.2	36.9	....	5.6	....	....	....	....	....	....	....	....	....	12-14	1,482	....	8.5	28.7	30.7	.2	5.3	....	....	....	....	5.3	2.6	5.4	....	5.4
15-17	1,656	....	5.1	17.1	31.9	....	5.0	1.8	6.3	....	8.1	....	....	....	....	8.1	15-17	1,482	....	5.9	20.6	31.4	.5	5.9	....	....	....	....	5.9	2.0	5.3	....	3.7
18-20	1,655	....	5.9	16.6	45.6	.3	5.0	....	....	....	9.8	....	....	....	....	9.8	18-20	1,482	.1	7.1	16.9	45.4	.3	6.2	....	....	....	....	6.2	2.5	5.6	....	8.0
21-23	1,656	.7	8.0	17.3	54.5	.3	5.4	....	....	....	12.6	....	....	....	....	12.6	21-23	1,482	.6	8.6	17.5	51.4	.1	5.8	....	....	....	....	5.8	3.9	6.5	....	10.3
All Hours	13,246	2.6	13.5	26.8	42.5	.1	5.6	....	....	....	17.9	....	....	....	....	17.9	All Hours	11,856	2.0	14.5	28.1	41.7	.3	5.9	....	....	....	....	5.9	10.5	7.5	....	17.0

MARCH														APRIL																			
Hour	Number of Observations	Clouds < 200 Ft and/or Visibility < 3 MI	Clouds < 1000 Ft and/or Visibility < 5 MI	Clouds < 4000 Ft and/or Visibility < 6 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Show and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Clouds < 200 Ft and/or Visibility < 3 MI	Clouds < 1000 Ft and/or Visibility < 5 MI	Clouds < 4000 Ft and/or Visibility < 6 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Show and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,581	.9	8.9	17.8	54.8	.3	4.6	....	....	....	4.6	8.3	6.8	....	....	13.2	02-02	1,530	.5	6.2	13.7	63.8	.3	2.2	....	....	....	....	2.2	6.5	4.9	....	11.1
03-05	1,581	4.6	18.3	30.3	50.6	.4	5.1	....	....	....	24.4	....	....	....	....	24.4	03-05	1,530	3.5	14.3	24.9	59.2	.5	1.8	....	....	....	....	1.8	16.9	5.2	....	21.2
06-08	1,581	4.9	25.9	40.5	36.8	.4	5.5	....	....	....	33.0	....	....	....	....	33.0	06-08	1,530	3.2	16.9	28.4	43.3	.3	2.6	....	....	....	....	2.6	19.1	9.5	....	1.25.8
09-11	1,581	.3	12.7	27.3	34.2	.6	5.4	....	....	....	12.1	....	....	....	....	12.1	09-11	1,530	....	7.1	27.9	36.3	.1	2.2	....	....	....	....	2.2	1.8	4.6	....	3.4
12-14	1,581	....	5.8	24.5	29.9	1.1	5.8	....	....	....	5.2	....	....	....	....	5.2	12-14	1,530	....	2.1	25.8	27.0	1.1	4.7	....	....	....	....	4.7	.5	2.0	....	5.2.9
15-17	1,581	....	4.1	16.1	30.9	1.3	5.0	....	....	....	5.0	....	....	....	....	5.0	15-17	1,530	....	2.2	16.7	33.6	2.2	6.3	....	....	....	....	6.3	.3	1.6	....	3.2
18-20	1,581	.2	4.6	12.5	43.4	2.2	6.3	....	....	....	5.4	....	....	....	....	5.4	18-20	1,530	....	1.8	8.1	45.9	1.7	3.9	....	....	....	....	3.9	.3	2.8	....	1.3
21-23	1,581	....	4.8	12.0	51.7	.9	5.3	....	....	....	8.5	....	....	....	....	8.5	21-23	1,530	.1	2.8	7.0	61.2	.9	3.0	....	....	....	....	3.0	.9	3.9	....	4.6
All Hours	12,642	1.4	10.7	22.6	42.0	.9	5.4	....	....	....	13.4	....	....	....	....	13.4	All Hours	12,239	.9	6.7	19.1	46.3	.9	3.3	....	....	....	....	3.3	5.8	4.3	....	2.9

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 ... indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

McCOY AFB, ORLANDO, FLORIDA

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY																
Hours	Number of Observations	Cellars <200 Ft and/or Visibility <3 MI	Cellars <2000 Ft and/or Visibility <3 MI	Cellars <4000 Ft and/or Visibility <6 MI	Cloud Cover <3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision
00-00	1,635	.2	3.7	12.4	68.7	.2	1.7	....	....	....	1.7	5.5	9.3	....	....	13.7
03-05	1,635	2.6	12.6	26.4	64.0	.1	1.5	....	....	....	1.5	19.4	9.1	....	....	29.3
06-08	1,688	3.0	15.0	30.5	46.6	.1	1.6	....	....	....	1.6	21.0	12.8	....	....	29.5
09-11	1,649	4.5	23.3	32.1	46.2	.6	2.7	....	....	....	2.7	8.8	6.7	....	....	7.5
12-14	1,690	.1	1.2	26.4	26.9	2.3	3.9	....	....	....	3.9	.2	4.2	....	....	5.2
15-17	1,646	.1	1.9	17.7	25.6	5.0	6.3	....	....	....	6.3	.1	6.3	....	....	6.6
18-20	1,631	....	1.7	12.4	33.3	4.5	6.1	....	....	....	6.1	.2	6.8	....	....	7.1
21-23	1,688	....	1.5	7.7	53.3	1.6	3.3	....	....	....	3.3	.4	6.8	....	....	7.1
All Hours	13,122	.8	5.3	19.7	43.1	1.8	3.4	....	....	....	3.4	6.0	7.8	....	....	12.7

JUNE																
Hours	Number of Observations	Cellars <200 Ft and/or Visibility <3 MI	Cellars <2000 Ft and/or Visibility <3 MI	Cellars <4000 Ft and/or Visibility <6 MI	Cloud Cover <3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision
00-00	1,619	....	2.2	7.3	56.0	.2	2.7	....	....	....	2.7	1.6	5.6	....	....	7.1
03-05	1,618	1.9	8.2	19.0	59.5	.4	2.6	....	....	....	2.6	12.6	8.0	....	....	18.7
06-08	1,680	1.2	10.1	22.2	36.9	.1	2.2	....	....	....	2.2	14.8	9.6	....	....	21.2
09-11	1,680	....	4.4	24.6	19.9	.6	3.5	....	....	....	3.5	1.3	3.3	....	....	3.6
12-14	1,680	.1	2.5	32.3	9.2	5.8	8.1	....	....	....	8.1	.2	1.8	....	....	8.1
15-17	1,619	.6	3.5	29.1	11.6	11.0	14.8	....	....	....	14.8	.2	1.9	....	....	2.2
18-20	1,619	.2	3.2	15.3	21.4	8.1	12.7	....	....	....	12.7	.6	3.4	....	....	4.0
21-23	1,680	.1	2.0	9.0	38.8	2.5	6.0	....	....	....	6.0	.2	4.1	....	....	4.3
All Hours	12,955	.5	4.5	19.3	31.1	3.6	6.6	....	....	....	6.6	3.8	4.7	....	....	10.7

AUGUST																
Hours	Number of Observations	Cellars <200 Ft and/or Visibility <3 MI	Cellars <2000 Ft and/or Visibility <3 MI	Cellars <4000 Ft and/or Visibility <6 MI	Cloud Cover <3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision
00-00	1,674	.2	1.6	3.3	52.6	.5	1.6	....	....	....	1.6	1.6	2.3	....	....	3.9
03-05	1,674	.9	3.6	8.7	62.3	....	1.0	....	....	....	1.0	7.5	2.7	....	....	9.7
06-08	1,674	1.3	6.2	12.5	42.4	.1	.8	....	....	....	.8	12.2	3.0	....	....	14.1
09-11	1,674	....	3.3	22.6	19.5	1.0	2.2	....	....	....	2.2	.2	.7	....	....	.8
12-14	1,674	.1	2.6	35.5	5.7	9.2	11.1	....	....	....	11.1	.2	.3	....	....	.5
15-17	1,673	.1	3.2	26.3	8.1	14.1	17.5	....	....	....	17.5	.1	.5	....	....	.6
18-20	1,674	.1	2.4	12.4	15.4	7.8	12.9	....	....	....	12.9	.2	.8	....	....	1.0
21-23	1,674	1.1	4.2	34.6	1.4	4.2	4.2	.4	1.4	1.8
All Hours	13,391	.3	3.0	15.7	30.1	4.3	6.4	6.4	2.8	1.5	4.0

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McCOY AFB, ORLANDO, FLORIDA

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER

OCTOBER

Hours	Number of Observations	Visibility <1.0 MI	Visibility <1.7 MI	Visibility <3 MI	Visibility <4000 Ft and/or	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,710	.4	5.5	10.3	50.6	.2	4.4	4.4	4.4	4.4	4.4	5.7	3.0	2.7	4.4	4.4	5.7
03-05	1,709	1.1	6.1	15.1	55.2	3.7	3.7	3.7	3.7	3.7	3.7	13.5	3.7	4.4	4.4	4.4	13.5
06-08	1,710	3.5	12.0	20.7	35.9	.2	3.9	3.9	3.9	3.9	3.9	16.6	3.9	3.7	3.9	3.9	16.6
09-11	1,710	7.4	28.5	37.0	4.4	5.7	5.7	5.7	5.7	5.7	5.7	3.1	1.2	2.0	3.1	3.1	3.1
12-14	1,709	2	3.8	37.6	7.6	8.9	11.8	11.8	11.8	11.8	11.8	1.6	.8	.9	1.6	1.6	1.6
15-17	1,709	1	4.4	23.5	12.4	6.1	14.5	14.5	14.5	14.5	14.5	1.8	.9	.9	1.8	1.8	1.8
18-20	1,709	3.6	14.6	22.6	4.3	13.2	13.2	13.2	13.2	13.2	13.2	1.5	1.4	1.4	1.5	1.5	1.5
21-23	1,710	1	3.9	10.4	37.6	1.5	7.7	7.7	7.7	7.7	7.7	2.6	2.5	2.5	2.6	2.6	2.6
All Hours 13,676	4	6.1	20.1	29.9	1.9	6.1	3.8	2.3	5.6	5.6	5.6	4.1	3.8	2.3	4.1	4.1	4.1

NOVEMBER

DECEMBER

Hours	Number of Observations	Visibility <1.0 MI	Visibility <1.7 MI	Visibility <3 MI	Visibility <4000 Ft and/or	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,618	1.7	10.6	18.9	58.4	.1	3.1	3.1	3.1	3.1	3.1	12.6	10.0	3.2	3.2	3.2	12.6
03-05	1,620	5.4	17.4	26.4	56.5	3.5	3.5	3.5	3.5	3.5	3.5	22.6	19.0	4.3	4.3	4.3	22.6
06-08	1,620	7.2	20.3	33.8	46.5	3.1	3.1	3.1	3.1	3.1	3.1	20.3	20.4	6.2	6.2	6.2	20.3
09-11	1,620	5	12.3	20.3	46.9	3.1	3.1	3.1	3.1	3.1	3.1	10.6	5.6	5.5	5.5	5.5	10.6
12-14	1,620	5.5	19.4	33.5	33.5	2.6	2.6	2.6	2.6	2.6	2.6	3.7	1.0	2.8	2.8	2.8	3.7
15-17	1,620	3.8	11.9	39.7	4.2	3.0	3.0	3.0	3.0	3.0	3.0	3.5	1.4	3.1	3.1	3.1	3.5
18-20	1,620	4.6	10.4	54.3	4	3.6	3.6	3.6	3.6	3.6	3.6	3.6	.9	2.7	2.7	2.7	3.6
21-23	1,620	3	5.9	11.3	58.1	1	3.6	3.6	3.6	3.6	3.6	5.4	2.7	2.7	2.7	2.7	5.4
All Hours 12,996	1.9	10.3	19.1	49.2	1	3.2	2.0	3.6	11.4	11.4	11.4	3.2	2.0	3.6	3.6	3.6	3.2

ANNUAL

Hours	Number of Observations	Visibility <1.0 MI	Visibility <1.7 MI	Visibility <3 MI	Visibility <4000 Ft and/or	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
All Hours 155,594	1.2	7.9	20.3	39.5	1.6	5.5	4.7	4.7	4.7	4.7	4.7	4.7	6.4	4.7	4.7	4.7	4.7

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McCoy AFB, Orlando, Florida Wind Roses

JANUARY

Dir.	Speed in Knots							Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-31		
N	2.0	4.7	5.2	1.3	.1		13.2	6.8	
NE	1.1	2.2	1.2	.9	.0		5.5	6.2	
E	1.7	1.2	1.1	.3	.0		3.4	6.4	
ESE	1.2	2.0	1.7	.4	.0		2.8	6.8	
SE	.6	1.2	1.2	.4	.0		3.4	6.7	
SSE	.4	.8	1.2	.4	.0		3.0	7.0	
SW	.4	.8	1.3	.8	.1		3.6	8.5	
WSW	.6	1.3	1.5	.9	.2		4.0	8.9	
W	1.0	2.2	2.5	1.4	.2	.0	7.4	7.9	
WNW	.6	1.7	2.1	1.7	.4	.1	7.0	8.1	
NW	.6	1.9	2.4	1.1	.1		6.1	7.8	
VAR	10.7						10.7		
CALM								10.0	
TOT	23.6	26.5	34.5	34.4	1.8	.2	100.0	6.7	

TOTAL NUMBER OF OBSERVATIONS: 1327

FEBRUARY

Dir.	Speed in Knots							Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-31		
N	1.3	3.2	3.8	1.4	.1		9.9	7.8	
NE	1.1	2.1	2.1	.5	.1	.1	6.0	6.8	
E	1.6	3.2	3.2	.7	.1		2.8	6.7	
ESE	.5	1.1	1.6	.8	.1	.0	4.1	8.0	
SE	.8	1.4	1.4	.7	.1		4.5	8.0	
SSE	1.3	2.4	2.6	2.1	.5	.1	8.9	8.5	
SW	.6	.8	1.8	1.3	.1	.1	4.7	8.4	
WSW	.6	1.2	1.5	.7	.2	.0	4.2	7.8	
W	1.3	2.5	2.4	1.1	.4	.2	7.3	8.6	
WNW	.7	1.6	2.0	1.0	.3	.0	5.5	8.0	
NW	.6	1.0	1.8	.7	.1	.0	4.1	7.8	
VAR	9.6						9.6		
CALM								100.0	
TOT	23.4	26.5	31.4	15.2	2.8	.6	100.0	7.0	

TOTAL NUMBER OF OBSERVATIONS: 1196

MARCH

Dir.	Speed in Knots							Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-31		
N	.9	2.6	2.9	1.3	.1	.0	8.0	7.6	
NE	.9	1.7	1.7	.8	.1	.0	5.2	7.3	
E	.6	1.4	1.5	.6	.1	.0	4.2	7.1	
ESE	1.1	1.9	1.7	.8	.1		3.6	6.8	
SE	.9	1.9	2.2	.9	.0	.0	6.0	7.1	
SSE	.6	1.5	2.2	.8	.1	.0	5.2	7.6	
SW	1.5	2.1	2.3	1.4	.1	.0	5.0	8.7	
WSW	.6	1.5	1.7	.9	.2	.0	4.9	8.0	
W	1.2	2.6	3.1	1.8	.3	.1	9.2	8.2	
WNW	.6	1.7	1.9	1.2	.2	.0	5.6	8.3	
NW	.4	1.3	1.5	.8	.1	.0	4.0	7.8	
VAR	9.1						9.1		
CALM								100.0	
TOT	21.3	27.6	32.1	16.6	2.1	.3	100.0	7.0	

TOTAL NUMBER OF OBSERVATIONS: 12648

APRIL

Dir.	Speed in Knots							Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-31		
N	.7	1.8	2.0	.6	.1	.0	5.2	7.1	
NE	.7	1.2	1.4	.4	.0	.0	3.8	6.8	
E	1.2	1.8	2.2	1.0	.0	.0	5.8	7.3	
ESE	.2	1.8	1.2	1.0	.2	.0	4.2	6.5	
SE	.9	1.9	2.8	1.3	.1	.0	7.0	7.9	
SSE	.6	2.7	2.1	1.2	.2	.0	6.9	7.9	
SW	.8	.9	1.3	.8	.2	.0	3.6	8.7	
WSW	.5	1.2	1.6	.7	.2	.0	4.2	8.0	
W	1.0	2.4	2.5	1.3	.1	.0	7.4	7.5	
WNW	.3	1.6	1.5	1.0	.1	.0	4.5	7.9	
NW	.3	.8	1.0	.5	.1	.0	2.7	8.1	
VAR	8.5						8.5		
CALM								100.0	
TOT	20.8	27.1	34.0	16.0	1.8	.3	100.0	7.0	

TOTAL NUMBER OF OBSERVATIONS: 12229

MCCOY AFB, ORLANDO, FLORIDA WIND ROSES

JUNE

Dir.	Speed in Knts*							Total	Mean Wind Speed
	0-3	4-6	7-10	11-15	17-21	22-27	28-33		
K	1.2	1.7	7.7	2.0	0	0	0	3.9	5.3
N	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
NE	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
E	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
SE	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
S	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
SW	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
W	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
NW	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
Cal.	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
TOT	34.2	34.2	28.8	8.6	1.0	2.0	.0	100.0	5.3

JULY

Dir.	Speed in Knts*							Total	Mean Wind Speed
	0-3	4-6	7-10	11-15	17-21	22-27	28-33		
K	1.2	1.7	7.7	2.0	0	0	0	3.9	5.3
N	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
NE	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
E	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
SE	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
S	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
SW	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
W	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
NW	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
Cal.	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
TOT	34.2	34.2	28.8	8.6	1.0	2.0	.0	100.0	5.3

AUGUST

Dir.	Speed in Knts*							Total	Mean Wind Speed
	0-3	4-6	7-10	11-15	17-21	22-27	28-33		
K	1.2	1.7	7.7	2.0	0	0	0	3.9	5.3
N	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
NE	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
E	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
SE	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
S	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
SW	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
W	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
NW	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
Cal.	1.4	1.8	7.7	1.4	0	0	0	3.2	5.1
TOT	49.1	49.1	16.5	4.0	.6	1.1	.0	100.0	4.2

*SPEEDS LESS THAN 1 KNOT ARE LISTED AS 0.

TOTAL NUMBER OF OBSERVATIONS 13955

TOTAL NUMBER OF OBSERVATIONS 13319

TOTAL NUMBER OF OBSERVATIONS 13390

McCoy AFB, Orlando, Florida Wind Roses

SEPTEMBER

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	2.6	3.5	1.9	4	0	0.4	7.3
NE	2.3	3.9	2.5	1.1	0	11.0	6.2
E	2.1	2.6	2.6	1.0	0	8.3	6.7
ENE	1.4	1.7	1.6	1.4	0	5.4	6.3
ESE	1.4	2.1	1.4	1.4	0	3.3	6.0
S	1.7	1.8	1.5	1.8	0	2.7	6.7
SSW	1.5	1.9	1.6	3	0	2.4	7.8
SW	1.6	1.6	1.4	1.1	0	1.8	6.4
WSW	1.0	1.0	1.6	1.1	0	3.0	6.4
W	2	0	4	2	0	2.0	5.7
WNW	0	0	4	2	0	2.1	5.6
WV	0	0	4	2	0	2.1	5.6
WVAR	0	0	4	2	0	2.1	5.6
CAUS	18.1					18.1	
TOT	30.5	30.2	22.1	7.6	1.1	100.0	5.3
TOTAL NUMBER OF OBSERVATIONS:							12956

OCTOBER

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	3.0	7.8	5.2	1.5	1.1	16.9	6.3
NE	2.5	3.1	3.9	1.8	1.2	14.5	7.1
E	1.8	2.4	2.9	1.3	1.2	10.3	7.5
ENE	1.7	0.8	0.6	1.3	0	2.6	6.6
ESE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	1.1	1.7	1.2	1.5	0	4.5	6.8
WNW	1.0	1.8	1.5	1.5	1.1	4.9	6.9
W	1.7	1.9	2.1	1.8	0	5.5	7.3
WVAR	9.7					9.7	
TOT	29.0	35.0	27.4	10.1	1.0	100.0	6.0
TOTAL NUMBER OF OBSERVATIONS:							1719

NOVEMBER

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	2.7	3.9	2.1	1.1	0	17.3	6.9
NE	2.5	3.9	2.5	1.4	0	8.9	7.1
E	1.2	1.8	1.9	1.8	0	2.7	6.8
ENE	1.6	1.0	1.0	1.0	0	2.4	6.5
ESE	0.6	1.1	0.8	0.2	0	2.7	5.8
S	1.6	1.9	1.5	2	0	1.3	6.9
SSW	1.4	1.7	1.8	1.3	0	2.2	7.1
SW	1.2	1.9	1.5	1.1	0	2.6	6.9
WSW	0	0	0	0	0	0	0
W	1.0	1.5	1.4	1.5	1.1	4.5	6.8
WNW	0	0	0	0	0	0	0
W	1.7	2.2	2.4	1.9	1.1	6.3	7.3
WVAR	11.7					11.7	
TOT	29.2	30.0	29.0	10.8	1.1	100.0	5.9
TOTAL NUMBER OF OBSERVATIONS:							12956

DECEMBER

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	2.8	5.6	5.4	1.8	1.1	15.6	6.7
NE	1.5	2.9	2.2	0.9	1.1	7.5	6.5
E	1.8	1.4	1.4	0.8	1.1	4.3	7.1
ENE	1.5	0	1.0	1.2	0	5.4	7.0
ESE	0	0	0	0	0	0	0
S	1.6	1.2	1.1	1.4	0	3.4	6.7
SSW	1.4	1.9	1.9	1.3	1.1	6.0	7.8
SW	1.4	1.9	1.1	1.6	1.1	3.2	7.9
WSW	0	0	0	0	0	0	0
W	1.1	1.7	1.7	1.7	1.1	5.4	6.9
WNW	1.6	1.2	1.8	1.8	1.2	7.7	8.2
W	1.0	1.9	2.2	1.1	1.1	6.3	7.4
WVAR	13.3					13.3	
TOT	28.7	29.0	29.0	12.0	1.3	100.0	6.1
TOTAL NUMBER OF OBSERVATIONS:							12646

ANNUAL

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.8	3.4	3.0	9	0	9.2	6.5
NE	1.3	2.1	1.7	1.1	0	2.9	6.4
E	1.7	2.4	2.0	0.8	1.1	6.9	6.4
ENE	2.2	2.9	2.7	1.1	0	9.0	6.5
ESE	1.0	1.5	1.6	1.1	0	4.8	6.0
S	1.9	1.3	1.2	1.5	0	3.9	6.6
SSW	1.7	2.6	2.1	1.9	0	7.8	6.7
SW	1.0	1.5	1.2	1.1	0	4.9	6.5
WSW	0	0	0	0	0	0	0
W	1.7	1.1	1.0	1.4	1.1	2.4	6.9
WNW	1.7	1.1	1.3	1.6	1.1	4.1	7.8
W	1.4	1.4	1.6	1.1	1.1	4.3	7.1
WVAR	18.7					18.7	
TOT	31.3	29.4	28.7	10.8	1.3	100.0	5.9
TOTAL NUMBER OF OBSERVATIONS:							15583

COLUMBUS AFB COLUMBUS, MISSISSIPPI (Lat. 33°38'N, Long. 38°27'W, Elev. 214 ft.)

Located nine miles north of Columbus, Mississippi, this airfield lies in the valley of the Tombigee River. Terrain adjacent to the field is quite flat and is occupied primarily by cotton fields and scrub oak.

Weather conditions at this station reflect the humid subtropical nature of the area's climate, a climate which is largely controlled by cyclonic activity from October through April with the balance of the year being controlled by radiational heating and cooling of a moist, conditionally unstable atmosphere.

Thundershowers are most numerous during July, however, hail occurs most frequently with squall line thunderstorms in late winter and early spring. In summer months, the development of cumulus clouds generally begin about 1000 hours local time and reach maximum development between 1400 and 1600 hours local time. During the months, May through September, when convectional heating and radiational cooling are the dominant weather controls, sky cover varies directly with the development and dissipation of the cumuliform clouds.

Based on an all hours category, low ceilings and visibilities occur with greater frequency during the winter months, however, due to a frequent occurrence of radiation fog in late summer and early fall, low ceilings and visibilities are still a problem in the early morning hours.

A chemical plant six miles north of the base is the one major source of air pollution in the area, however, only in the cases of light north-

COLUMBUS AFB (Cont'd.)

erly winds and low level inversions does the smoke lower visibilities below one mile.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from March 1942-February 1946, April-June 1946 and November 1958-July 1967; with the exception of cloud cover for which data are not available prior to 1946.

COLUMBUS AFB COLUMBUS, MISSISSIPPI

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	52.7	58.1	64.4	75.5	83.0	89.2	91.3	91.0	85.4	76.5	64.9	52.3	73.9
Mean	43.1	47.9	54.2	64.3	71.9	79.0	81.1	80.9	74.9	63.7	53.5	43.2	63.4
Minimum	33.0	37.3	43.7	52.7	60.4	68.4	70.6	70.5	64.0	50.7	41.6	33.8	52.4

Record Temperature Extremes

Maximum	81	84	87	90	96	104	104	106	98	91	84	79
Minimum	1	10	15	32	39	49	58	57	36	30	20	3
	Period of Record: 1942-1946, 1958-1965											

MONTHLY MEANS

Precipitation (Inches)

Precipitation	4.65	5.42	6.46	5.07	3.87	2.93	4.98	2.88	2.48	2.46	4.09	5.30	50.56'
Snowfall*	1.2	.2	T	.0	.0	.0	.0	.0	.0	.0	.0	.0	3.5
	(*Hail was included in Snowfall Summary prior to January 1956)												
	Period of Record: Precipitation 1942-1946, 1958-1965 Snowfall 1946, 1958-1965												

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	W	W	WNW	SSE	W	W	S	ESE	WNW	NE	SW	SE
Velocity	42	38	51	47	47	46	71	32	40	35	40	42
	Period of Record: 1959-1965											

Maximum and/or Minimum Anemometer Height: 15 feet 04/60; 13 feet 04/59

COLUMBUS AFB, COLUMBUS, MISSISSIPPI

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY														FEBRUARY																	
Hours	Number of Observations	Observations <200 Ft and/or Visibility <3 MI	Observations <4000 Ft and/or Visibility <6 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Observations <200 Ft and/or Visibility <3 MI	Observations <4000 Ft and/or Visibility <6 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,266	1.7	24.3	42.5	37.6	1.1	13.3	7	1.8	15.7	17.5	18.9	----	----	33.1	00-02	1,053	9	19.0	39.5	60.9	9	14.4	----	1.0	15.4	12.8	14.7	----	25.6	
03-05	1,266	2.2	27.9	44.8	36.6	4	12.9	1	1.3	14.3	19.1	19.5	1.2	----	35.6	03-05	1,053	1.6	23.1	45.3	41.1	7	16.3	----	1.1	17.5	17.3	15.0	----	29.5	
06-08	1,265	2.0	33.8	31.5	30.3	4	12.5	----	2.1	14.5	24.6	20.7	----	2	39.6	06-08	1,052	1.5	32.4	52.9	31.4	4	14.2	----	9	15.0	21.5	19.8	----	35.1	
09-11	1,266	7	26.9	46.8	27.9	7	10.6	1	1.7	12.2	15.5	17.5	1.1	2	31.7	09-11	1,053	1.1	29.2	46.0	29.5	6	11.7	----	5	12.2	12.5	17.4	----	27.3	
12-14	1,266	1	23.6	39.5	28.1	2	9.4	3	1.5	10.9	9.4	13.3	----	----	21.4	12-14	1,053	1	22.6	41.0	20.7	3	11.7	----	3	12.0	8.1	11.4	3	4	12.6
15-17	1,266	1	19.4	33.9	28.0	2	8.6	----	7	9.3	8.5	12.1	----	1	19.4	15-17	1,052	1	18.5	35.2	30.4	1.0	11.9	1.1	5	12.1	8.7	11.1	2	4	19.5
18-20	1,266	3	19.6	36.2	32.6	2	11.1	4	1.2	12.5	10.5	15.4	----	----	25.0	18-20	1,053	2	17.8	34.2	33.6	1.5	14.3	1.1	1.1	15.5	10.6	13.9	3	1	23.6
21-23	1,266	8	19.8	39.3	35.8	6	11.9	3	1.4	13.3	12.0	16.4	----	----	26.6	21-23	1,051	5	17.2	34.7	32.2	1.1	13.0	----	1.1	14.1	10.4	14.2	----	23.7	
All Hours	9,647	1.0	24.7	41.8	32.1	3	11.3	2	1.5	12.9	14.7	16.3	0	1	29.0	All Hours	8,420	8	22.5	41.1	34.2	8	13.4	0	8	14.2	12.7	14.7	1	1	29.4

MARCH														APRIL																	
Hours	Number of Observations	Observations <200 Ft and/or Visibility <3 MI	Observations <4000 Ft and/or Visibility <6 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Observations <200 Ft and/or Visibility <3 MI	Observations <4000 Ft and/or Visibility <6 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,269	6	14.3	36.4	40.8	2.0	10.2	----	1	10.3	8.0	18.4	----	----	24.3	00-02	1,260	5	8.5	25.3	47.0	2.8	6.7	----	----	6.7	9.3	16.3	----	1	24.0
03-05	1,269	1.8	20.8	43.9	40.3	2.0	11.3	----	5	11.8	12.6	20.2	----	----	29.4	03-05	1,259	1.0	15.9	38.2	42.8	3.4	8.2	----	----	8.2	17.3	21.1	----	----	33.8
06-08	1,269	1.4	26.3	49.6	35.7	1.0	10.1	----	6	10.7	16.4	22.8	----	1.1	35.4	06-08	1,258	6	18.0	42.2	28.3	1.4	7.5	----	----	7.5	15.3	22.8	----	----	33.7
09-11	1,269	4	23.6	40.4	31.7	1.2	7.9	----	7	8.5	6.9	15.6	----	8	22.5	09-11	1,259	----	17.1	31.9	29.8	1.4	5.7	----	----	5.7	2.9	11.6	----	4	14.9
12-14	1,269	----	15.8	34.6	28.4	1.2	8.0	1	3	8.4	3.6	10.7	----	8	14.8	12-14	1,260	----	8.8	22.6	30.5	6	4.1	----	1	4.1	1.0	5.5	----	6	7.1
15-17	1,269	----	10.9	26.0	32.1	1.4	8.6	----	4	9.0	3.1	9.9	----	1	12.8	15-17	1,260	----	5.3	16.6	32.4	1.2	5.9	----	----	5.9	1.7	6.3	----	6	8.6
18-20	1,267	1	10.3	25.8	37.9	2.1	9.7	----	1	9.2	5.0	13.5	----	----	17.7	18-20	1,260	----	6.0	15.6	37.2	2.9	7.7	----	----	7.7	3.4	8.7	----	2	12.1
21-23	1,269	1	10.7	29.8	43.7	1.9	9.6	----	3	9.9	6.8	16.5	----	1	21.7	21-23	1,260	2	6.3	20.2	45.4	2.9	7.4	----	----	7.4	4.5	12.9	----	16.8	
All Hours	9,670	5	16.6	35.8	36.3	1.6	9.4	0	4	9.0	7.8	15.9	----	2	22.3	All Hours	10,076	3	10.7	26.6	36.8	2.1	6.6	----	0	6.6	6.9	13.2	----	2	18.9

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

--- indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

COLUMBUS AFB, COLUMBUS, MISSISSIPPI

Percentage Frequencies of Occurrence of Specified Weather Conditions

JUNE																
Hours	Number of Observations	Visibility < 1/2 MI	Visibility < 3/4 MI	Visibility < 1 MI	Cloud Cover 1/10	Thunder With or Without Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrence of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrence of Obscuration to Vision
00-02	1,308	5.5	19.1	92.2	9	4.2	9.6	14.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	22.9
03-05	1,308	5.5	19.1	92.2	9	4.2	9.6	14.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	22.9
06-08	1,308	5.5	19.1	92.2	9	4.2	9.6	14.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	22.9
09-11	1,308	5.5	19.1	92.2	9	4.2	9.6	14.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	22.9
12-14	1,308	5.5	19.1	92.2	9	4.2	9.6	14.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	22.9
15-17	1,308	5.5	19.1	92.2	9	4.2	9.6	14.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	22.9
18-20	1,308	5.5	19.1	92.2	9	4.2	9.6	14.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	22.9
21-23	1,308	5.5	19.1	92.2	9	4.2	9.6	14.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	22.9
All Hours	9,596	6.9	21.6	96.7	1.8	5.0	6.6	10.8	0.0	0.0	16.2	0.0	0.0	0.0	0.0	16.2

JULY																
Hours	Number of Observations	Visibility < 1/2 MI	Visibility < 3/4 MI	Visibility < 1 MI	Cloud Cover 1/10	Thunder With or Without Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrence of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrence of Obscuration to Vision
00-02	1,206	4.2	10.4	84.3	1.1	1.8	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
03-05	1,209	4.2	10.4	84.3	1.1	1.8	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
06-08	1,209	4.2	10.4	84.3	1.1	1.8	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
09-11	1,208	4.2	10.4	84.3	1.1	1.8	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
12-14	1,208	4.2	10.4	84.3	1.1	1.8	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
15-17	1,208	4.2	10.4	84.3	1.1	1.8	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
18-20	1,209	4.2	10.4	84.3	1.1	1.8	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
21-23	1,209	4.2	10.4	84.3	1.1	1.8	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
All Hours	9,669	5.4	16.7	86.2	3.5	4.6	6.0	8.0	0.0	0.0	13.0	0.0	0.0	0.0	0.0	13.0

AUGUST																
Hours	Number of Observations	Visibility < 1/2 MI	Visibility < 3/4 MI	Visibility < 1 MI	Cloud Cover 1/10	Thunder With or Without Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrence of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrence of Obscuration to Vision
00-02	1,186	5.5	14.6	95.6	1.4	1.4	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
03-05	1,186	5.5	14.6	95.6	1.4	1.4	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
06-08	1,186	5.5	14.6	95.6	1.4	1.4	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
09-11	1,186	5.5	14.6	95.6	1.4	1.4	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
12-14	1,186	5.5	14.6	95.6	1.4	1.4	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
15-17	1,186	5.5	14.6	95.6	1.4	1.4	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
18-20	1,186	5.5	14.6	95.6	1.4	1.4	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
21-23	1,186	5.5	14.6	95.6	1.4	1.4	6.6	6.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	13.2
All Hours	9,527	6.9	20.7	94.3	1.9	2.9	6.6	6.0	0.0	0.0	13.0	0.0	0.0	0.0	0.0	13.0

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 ... indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

COLUMBUS AFB, COLUMBUS, MISSISSIPPI

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER														OCTOBER													
Hours	Number of Observations	Visibility < 1/2 MI	Visibility < 3/4 MI	Visibility < 1 MI	Visibility < 1 1/4 MI	Visibility < 2 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision									
00-02	1,080	2	10.0	21.3	59.8	4	3.3	13.2	6.0	0.0	0.0	0.0	18.0	3.3	13.2	6.0	0.0	0.0	28.1								
03-05	1,080	1.3	16.0	31.1	55.8	2	4.4	28.9	9.1	0.0	0.0	0.0	32.8	4.4	28.9	9.1	0.0	0.0	38.3								
06-08	1,080	1.9	22.7	42.7	43.0	4	5.6	29.0	16.0	0.0	0.0	0.0	40.6	5.6	29.0	16.0	0.0	0.0	45.1								
09-11	1,080	0.0	16.9	29.7	40.1	2	4.6	3.9	8.0	0.0	0.0	0.0	11.4	4.6	3.9	8.0	0.0	0.0	28.3								
12-14	1,080	0.0	10.4	30.4	26.3	1.8	6.6	1.9	3.1	0.0	0.0	0.0	4.9	6.6	1.9	3.1	0.0	0.0	7.4								
15-17	1,079	0.0	6.9	19.6	32.3	1.9	5.9	2.4	3.4	0.0	0.0	0.0	5.8	5.9	2.4	3.4	0.0	0.0	8.3								
18-20	1,079	0.0	5.5	16.6	41.3	2.3	6.6	4.4	5.2	0.0	0.0	0.0	9.3	6.6	4.4	5.2	0.0	0.0	12.6								
21-23	1,079	1.1	6.1	16.5	54.0	1.6	4.0	7.2	6.0	0.0	0.0	0.0	11.9	4.0	7.2	6.0	0.0	0.0	15.1								
All Hours	9,537	4	11.6	26.2	44.0	1.1	5.1	11.1	7.1	0.0	0.0	0.0	16.8	5.1	11.1	7.1	0.0	0.0	20.4								

NOVEMBER														DECEMBER													
Hours	Number of Observations	Visibility < 1/2 MI	Visibility < 3/4 MI	Visibility < 1 MI	Visibility < 1 1/4 MI	Visibility < 2 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision									
00-02	1,170	2.0	14.5	30.6	49.2	6	8.5	13.2	14.4	0.0	0.0	0.0	55.3	8.5	13.2	14.4	0.0	0.0	69.6								
03-05	1,170	3.2	18.9	36.1	46.2	6	7.7	10.8	17.9	0.0	0.0	0.0	31.5	7.7	10.8	17.9	0.0	0.0	36.5								
06-08	1,170	4.1	20.2	40.4	34.2	3	8.8	9.8	22.2	0.0	0.0	0.0	41.1	8.8	9.8	22.2	0.0	0.0	37.4								
09-11	1,170	7	20.3	35.2	31.5	1	7.2	9.3	16.4	0.0	0.0	0.0	24.8	7.2	9.3	16.4	0.0	0.0	33.6								
12-14	1,170	1	12.1	20.0	32.2	0.0	4.9	4.1	10.2	0.0	0.0	0.0	13.8	4.9	4.1	10.2	0.0	0.0	23.2								
15-17	1,170	0.0	9.3	23.1	36.0	1.1	5.4	3.5	10.6	0.0	0.0	0.0	14.0	5.4	3.5	10.6	0.0	0.0	23.2								
18-20	1,170	3	8.9	23.0	44.7	6	6.2	5.5	12.8	0.0	0.0	0.0	17.4	6.2	5.5	12.8	0.0	0.0	28.2								
21-23	1,170	6	10.1	25.0	47.7	5	6.6	7.3	14.6	0.0	0.0	0.0	20.9	6.6	7.3	14.6	0.0	0.0	26.4								
All Hours	9,560	1.4	15.3	31.4	39.7	4	6.9	11.2	14.9	0.0	0.0	0.0	23.6	6.9	11.2	14.9	0.0	0.0	27.7								

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

... indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

ANNUAL

Hours	Number of Observations	Visibility < 1/2 MI	Visibility < 3/4 MI	Visibility < 1 MI	Visibility < 1 1/4 MI	Visibility < 2 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
All Hours	112,941	7	13.6	29.1	37.0	1.4	7.1	10.0	12.4	0.0	0.0	0.0	7.4	9.8	12.4	0.0	0.0	20.4

COLUMBUS AFB, COLUMBUS, MISSISSIPPI WIND ROSES

JANUARY

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.7	2.7	2.1	1.6	.3	11.7	7.7
NE	1.0	1.1	1.0	.3	.0	3.5	6.0
E	.4	.3	.5	.0	.0	2.4	5.0
ESE	.9	1.2	.8	.1	.0	3.1	5.4
SE	1.3	2.1	1.5	.5	.0	10.2	7.0
S	1.8	3.2	2.6	1.4	.2	20.5	6.7
SSW	.9	1.3	1.2	.1	.0	2.5	6.1
SW	.3	.5	.6	.2	.1	1.6	6.6
WSW	.7	1.2	1.1	.7	.1	6.7	7.7
W	1.0	1.8	2.2	1.5	.8	6.7	8.2
WNW	1.0	2.1	2.4	1.7	.4	7.7	8.5
WIND CALM						18.4	
TOT	34.3	26.8	27.6	11.3	1.6	100.0	5.8

TOTAL NUMBER OF OBSERVATIONS 9617

FEBRUARY

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.2	1.2	1.8	1.8	.1	11.5	7.6
NE	.9	1.0	.9	.2	.1	2.9	5.9
E	1.0	1.2	1.1	.1	.0	3.5	5.6
ESE	.9	1.4	1.4	.3	.0	4.0	6.3
SE	1.5	2.2	2.4	.6	.1	7.0	6.8
S	2.1	3.6	3.9	1.4	.3	11.6	7.4
SSW	.6	.9	1.3	.3	.2	3.0	7.0
SW	.4	.7	.8	.3	.1	2.3	7.4
WSW	.5	1.2	1.5	.9	.2	4.6	8.7
W	.4	1.0	1.8	.9	.3	4.4	9.0
WNW	.7	1.5	2.3	1.5	.3	6.1	9.0
WIND CALM						16.2	
TOT	31.4	26.6	30.1	11.4	1.9	100.0	6.2

TOTAL NUMBER OF OBSERVATIONS 10668

MARCH

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.3	2.2	2.8	1.3	.2	7.9	7.8
NE	1.0	1.0	1.2	.1	.1	2.9	5.6
E	.6	.7	.7	.1	.0	2.1	5.9
ESE	1.2	1.9	1.0	.2	.1	4.4	6.6
SE	1.5	2.3	2.1	1.6	.1	6.6	6.4
S	1.7	3.5	2.7	2.5	.3	12.8	7.9
SSW	.9	1.8	2.0	.9	.1	3.7	7.5
SW	.4	.7	.9	.4	.1	2.5	7.9
WSW	.6	1.4	1.7	1.2	.1	4.9	8.3
W	.6	1.0	1.9	1.4	.3	5.4	8.7
WNW	.7	1.4	1.9	1.2	.2	5.5	8.5
WIND CALM						15.2	
TOT	30.6	24.9	28.5	13.5	2.2	100.0	6.3

TOTAL NUMBER OF OBSERVATIONS 9696

APRIL

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.4	2.4	2.4	1.2	.1	7.5	7.1
NE	1.1	1.4	1.0	.2	.0	3.7	5.6
E	1.6	1.6	.4	.1	.0	1.6	5.2
ESE	.7	1.3	.9	.3	.0	3.2	6.0
SE	2.4	3.2	1.9	1.5	.0	8.0	7.5
S	2.5	4.9	2.8	2.3	.2	12.7	7.4
SSW	1.3	1.8	2.7	.5	.0	6.4	6.7
SW	.5	.5	.6	.4	.0	2.0	7.1
WSW	.8	1.1	.9	.5	.2	3.5	7.4
W	.8	1.2	1.5	1.1	.1	4.7	8.0
WNW	.8	1.4	2.2	1.2	.1	5.7	8.2
WIND CALM						15.6	
TOT	34.0	25.7	28.2	10.8	1.1	100.0	5.8

TOTAL NUMBER OF OBSERVATIONS 10668

COLUMBUS AFB, COLUMBUS, MISSISSIPPI WIND ROSES

Dir.	MAY						JUNE						Total	Mean Wind Speed	
	Speed in Knots		Speed in Knots		Speed in Knots		Speed in Knots		Speed in Knots		Speed in Knots				
	0-3	4-6	7-10	11-16	17-21	22-27	28-31	31-40	41-47	48-55	56				
N	1.9	2.6	2.1	1.1	0			2.3	4.7	4.0	3	0		7.8	3.3
NE	1.1	1.7	1.8	1.2	0			1.3	1.3	1.1	0	0		1.6	2.0
E	1.7	1.2	0.9	0.1	0			1.0	1.1	0.9	0	0		2.6	4.7
ESE	1.8	1.5	1.6	1.1	0			2.8	2.1	1.2	1	0		1.6	1.7
S	2.9	2.3	2.6	3	0			1.2	1.1	1.6	1.8	0		2.8	4.8
SSE	2.7	4.3	4.3	3.9	1			1.7	2.4	1.2	1	0		4.8	5.2
SW	1.3	1.9	1.1	1.1	0			1.3	1.1	1.2	1	0		2.1	3.0
WSW	1.9	1.3	1.8	1.1	0			1.2	1.6	1.2	1.8	0		4.8	5.2
W	1.2	1.6	1.8	1.4	0			1.1	1.1	1.1	1.1	0		3.8	5.3
WNW	0.9	1.0	1.0	1.4	0			0.7	0.7	0.5	0	0		1.8	2.0
WV	1.0	1.6	1.3	1.4	0			1.8	1.9	1.0	1.2	0		3.8	5.4
WVNW															
WVSW															
CALM	23.3							29.6						29.6	
TOT	65.6	87.8	86.3	4.6	3	0	0	50.8	30.2	17.2	2.8	1.1	0	100.0	3.8
TOTAL NUMBER OF OBSERVATIONS												100.0	9525		

Dir.	MAY						JUNE						Total	Mean Wind Speed	
	Speed in Knots		Speed in Knots		Speed in Knots		Speed in Knots		Speed in Knots		Speed in Knots				
	0-3	4-6	7-10	11-16	17-21	22-27	28-31	31-40	41-47	48-55	56				
N	2.6	2.2	1.6	1.2	0			2.7	2.7	1.4	2	0		1.0	2.0
NE	1.4	1.2	1.6	1.1	0			1.6	0.9	1.3	1.1	0		3.0	4.9
E	1.3	1.0	1.1	1.1	0			1.9	1.8	1.6	1.1	0		2.2	4.2
ESE	1.3	1.3	1.4	1.1	0			2.2	1.8	1.6	1.1	0		4.5	4.7
S	2.0	1.7	1.5	1.5	0			1.8	1.0	1.5	1.1	0		7.0	4.7
SSE	2.0	1.7	1.5	1.5	0			1.8	2.4	1.9	1.0	0		2.2	4.6
SW	3.7	4.0	1.2	1.1	0			1.3	2.1	1.8	1.1	0		4.9	4.7
WSW	3.0	2.3	1.3	1.1	0			1.8	1.1	1.7	1.1	0		4.8	4.5
W	1.3	1.6	1.8	1.1	0			1.9	1.3	1.4	1.1	0		4.8	4.7
WNW	2.9	1.1	1.5	1.4	0			1.7	1.8	1.3	1.0	0		1.8	4.6
W	1.3	1.2	1.8	1.1	0			1.8	1.9	1.8	1.3	0		4.0	5.0
WNW	1.1	1.3	1.0	1.1	0			1.8	1.4	1.9	1.3	0		1.0	5.0
WVNW															
WVSW															
CALM	29.1							29.7						29.7	
TOT	97.4	87.5	13.3	3.3	2	1	1	57.4	28.7	12.4	1.4	1.1	0	100.0	3.3
TOTAL NUMBER OF OBSERVATIONS												100.0	9672		

Dir.	MAY						JUNE						Total	Mean Wind Speed	
	Speed in Knots		Speed in Knots		Speed in Knots		Speed in Knots		Speed in Knots		Speed in Knots				
	0-3	4-6	7-10	11-16	17-21	22-27	28-31	31-40	41-47	48-55	56				
N	2.6	2.2	1.6	1.2	0			2.7	2.7	1.4	2	0		1.0	2.0
NE	1.4	1.2	1.6	1.1	0			1.6	0.9	1.3	1.1	0		3.0	4.9
E	1.3	1.0	1.1	1.1	0			1.9	1.8	1.6	1.1	0		2.2	4.2
ESE	1.3	1.3	1.4	1.1	0			2.2	1.8	1.6	1.1	0		4.5	4.7
S	2.0	1.7	1.5	1.5	0			1.8	1.0	1.5	1.1	0		7.0	4.7
SSE	2.0	1.7	1.5	1.5	0			1.8	2.4	1.9	1.0	0		2.2	4.6
SW	3.7	4.0	1.2	1.1	0			1.3	2.1	1.8	1.1	0		4.9	4.7
WSW	3.0	2.3	1.3	1.1	0			1.8	1.1	1.7	1.1	0		4.8	4.5
W	1.3	1.6	1.8	1.1	0			1.9	1.3	1.4	1.1	0		4.8	4.7
WNW	2.9	1.1	1.5	1.4	0			1.7	1.8	1.3	1.0	0		1.8	4.6
W	1.3	1.2	1.8	1.1	0			1.8	1.9	1.8	1.3	0		4.0	5.0
WNW	1.1	1.3	1.0	1.1	0			1.8	1.4	1.9	1.3	0		1.0	5.0
WVNW															
WVSW															
CALM	29.1							29.7						29.7	
TOT	97.4	87.5	13.3	3.3	2	1	1	57.4	28.7	12.4	1.4	1.1	0	100.0	3.3
TOTAL NUMBER OF OBSERVATIONS												100.0	9672		

COLUMBUS AFB, COLUMBUS, MISSISSIPPI WIND ROSES

SEPTEMBER

		Speed in Knots						Mean Wind Speed				
		0-3	4-6	7-10	11-16	17-22	23-33	34-40	41-47	48-55	56	Total
Dir.		31	18	5	9	1	11	2	7	2	11	127
NE		24	21	12	2	1	5	1	1	1	1	47
E		20	25	17	4	1	6	1	1	1	1	46
SE		15	20	15	4	1	2	1	1	1	1	43
S		12	17	14	9	1	5	1	1	1	1	52
SW		20	28	17	9	1	6	1	1	1	1	52
W		9	16	13	10	1	7	1	1	1	1	52
NW		4	5	3	10	1	1	1	1	1	1	24
Wind		11	9	5	11	1	10	1	1	1	1	77
WAVE		13	15	9	12	1	1	1	1	1	1	62
CALM		26	5									26
TOT		147	285	174	39	4	1	1	1	1	1	1000

TOTAL NUMBER OF OBSERVATIONS 8693

OCTOBER

		Speed in Knots						Mean Wind Speed				
		0-3	4-6	7-10	11-16	17-22	23-33	34-40	41-47	48-55	56	Total
Dir.		3	3	3	1	1	1	1	1	1	1	127
NE		2	1	1	1	1	1	1	1	1	1	12
E		2	1	1	1	1	1	1	1	1	1	12
SE		2	1	1	1	1	1	1	1	1	1	12
S		2	1	1	1	1	1	1	1	1	1	12
SW		2	1	1	1	1	1	1	1	1	1	12
W		2	1	1	1	1	1	1	1	1	1	12
NW		2	1	1	1	1	1	1	1	1	1	12
Wind		2	1	1	1	1	1	1	1	1	1	12
WAVE		2	1	1	1	1	1	1	1	1	1	12
CALM		29	6									29
TOT		54	29	16	3	1	1	1	1	1	1	1000

TOTAL NUMBER OF OBSERVATIONS 993

NOVEMBER

		Speed in Knots						Mean Wind Speed				
		0-3	4-6	7-10	11-16	17-22	23-33	34-40	41-47	48-55	56	Total
Dir.		3	3	3	1	1	1	1	1	1	1	127
NE		2	1	1	1	1	1	1	1	1	1	12
E		2	1	1	1	1	1	1	1	1	1	12
SE		2	1	1	1	1	1	1	1	1	1	12
S		2	1	1	1	1	1	1	1	1	1	12
SW		2	1	1	1	1	1	1	1	1	1	12
W		2	1	1	1	1	1	1	1	1	1	12
NW		2	1	1	1	1	1	1	1	1	1	12
Wind		2	1	1	1	1	1	1	1	1	1	12
WAVE		2	1	1	1	1	1	1	1	1	1	12
CALM		29	6									29
TOT		48	23	20	6	1	1	1	1	1	1	1000

TOTAL NUMBER OF OBSERVATIONS 999

DECEMBER

		Speed in Knots						Mean Wind Speed				
		0-3	4-6	7-10	11-16	17-22	23-33	34-40	41-47	48-55	56	Total
Dir.		2	2	2	1	1	1	1	1	1	1	127
NE		1	1	1	1	1	1	1	1	1	1	12
E		1	1	1	1	1	1	1	1	1	1	12
SE		1	1	1	1	1	1	1	1	1	1	12
S		1	1	1	1	1	1	1	1	1	1	12
SW		1	1	1	1	1	1	1	1	1	1	12
W		1	1	1	1	1	1	1	1	1	1	12
NW		1	1	1	1	1	1	1	1	1	1	12
Wind		1	1	1	1	1	1	1	1	1	1	12
WAVE		1	1	1	1	1	1	1	1	1	1	12
CALM		29	6									29
TOT		41	24	24	8	1	1	1	1	1	1	1000

TOTAL NUMBER OF OBSERVATIONS 960

ANNUAL

		Speed in Knots						Mean Wind Speed				
		0-3	4-6	7-10	11-16	17-22	23-33	34-40	41-47	48-55	56	Total
Dir.		2	2	2	1	1	1	1	1	1	1	127
NE		1	1	1	1	1	1	1	1	1	1	12
E		1	1	1	1	1	1	1	1	1	1	12
SE		1	1	1	1	1	1	1	1	1	1	12
S		1	1	1	1	1	1	1	1	1	1	12
SW		1	1	1	1	1	1	1	1	1	1	12
W		1	1	1	1	1	1	1	1	1	1	12
NW		1	1	1	1	1	1	1	1	1	1	12
Wind		1	1	1	1	1	1	1	1	1	1	12
WAVE		1	1	1	1	1	1	1	1	1	1	12
CALM		29	6									29
TOT		44	26	21	6	1	1	1	1	1	1	1000

TOTAL NUMBER OF OBSERVATIONS 11990

WHITEMAN AFB KNOB NOSTER, MISSOURI (Lat. 38°44'N, Long. 93°34'W, Elev. 869 ft.)

Whiteman AFB is located in the rolling hills of western Missouri and lies about 65 miles southeast of Kansas City. Within a 75 mile radius of the base, terrain varies from 700 to 1400 feet with the higher elevations being to the south and west.

Climate in the Whiteman area is of a continental nature with its large change in temperatures and air masses from summer to winter. During the summer months maritime tropical air masses characterize western Missouri weather, while dry continental air is predominate in the winter. Violent weather conditions such as squall lines and their associated phenomena of hail, strong winds and tornadoes, occur most frequently in the spring.

Flying weather conditions are best during the late summer and early fall when cyclonic activity is at a minimum and flying weather restrictions are limited primarily to thundershowers, haze and radiation fog.

Industrial air pollution is no problem in the Whiteman area since the base is located far from any large population centers. Only when northwesterly winds are accompanied by a low level inversion does pollution reduce visibility. Rarely do these conditions reduce visibilities below five miles.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from December 1942-September 1946 and June 1954-August 1967; with the exception of cloud cover for which data are not available prior to 1946.

WHITEMAN AFB KNOB NOSTER, MISSOURI

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	38.4	43.4	52.2	65.6	75.4	82.8	88.4	87.7	80.3	69.7	54.5	40.5	64.9
Mean	29.6	34.3	42.7	55.5	65.7	73.7	78.5	77.4	69.7	59.0	45.0	32.5	55.3
Minimum	20.4	24.9	32.7	45.1	55.8	64.2	68.2	66.9	58.7	47.9	35.0	24.1	45.4

Record Temperature Extremes

Maximum	71	76	86	92	94	102	106	106	100	94	80	69
Minimum	-11	-4	-5	22	32	41	52	48	38	26	4	-8
Period of Record: 1942-1946, 1954-1966												

MONTHLY MEANS

Precipitation (Inches)

Precipitation	1.54	1.63	3.06	4.11	4.41	4.60	3.29	3.46	3.92	3.11	1.49	1.78	36.38
Snowfall*	5.6	5.1	4.6	.8	T	.0	.0	.0	.0	T	.6	5.4	22.1
(*Hail was included in Snowfall Period of Record: Precipitation 1943-1946, 1954-1966 Snowfall 1946, 1954-1966)													

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	SSW	WSW	SSW	W	NW	NW	NW	NNW	SW	NW	SW	WNW
Velocity	42	69	65	60	48	67	49	35	37	37	45	44
Period of Record: 1946, 1955-1966												

Maximum and/or Minimum Anemometer Height: 75 feet 06/54; 13 feet 04/56

WHITEMAN AFB, KNOB NOSTER, MISSOURI

Percentage Frequencies of Occurrence of Specified Weather Conditions

FEBRUARY																
Hours	Number of Observations	Chillings <200 F and/or Visibility <1/2 M	Chillings <2000 F and/or Visibility <3 M	Chillings <4000 F and/or Visibility <6 M	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-00	1,981	2.0	21.0	34.7	31.0	1.2	7.1	1.2	7.1	1.2	13.6	8.5	7.7	7.7	21.4	21.4
03-05	1,980	2.0	22.2	34.3	31.6	1.1	4.7	1.2	7.5	1.1	13.1	10.1	6.6	6.6	23.9	23.9
06-08	1,980	3.6	25.0	36.3	32.2	1.1	5.9	1.6	6.5	1.1	13.7	10.7	6.6	6.6	28.7	28.7
09-11	1,979	2.6	25.1	35.4	32.7	1.1	4.4	0.9	8.0	1.1	13.1	17.1	5.5	6.6	1.1	24.1
12-14	1,980	1.1	23.0	33.5	32.2	1.1	3.7	1.4	7.1	1.1	11.0	12.0	5.5	7.7	1.1	18.5
15-17	1,980	1.1	20.0	30.0	31.6	1.1	4.7	0.9	5.4	1.1	10.7	12.3	6.0	1.0	1.1	18.3
18-20	1,980	1.1	18.9	30.9	30.7	1.1	4.8	1.5	6.1	1.1	13.0	12.7	9.6	1.2	1.1	22.0
21-23	1,981	1.6	19.7	32.6	32.2	1.1	5.3	1.0	7.3	1.1	13.9	13.0	9.2	1.2	1.1	21.0
All Hours 12,643	2.0	22.0	34.1	30.7	1.1	4.8	1.2	6.9	6.9	1.1	12.6	13.4	8.7	8.7	22.3	22.3

MARCH																
Hours	Number of Observations	Chillings <200 F and/or Visibility <1/2 M	Chillings <2000 F and/or Visibility <3 M	Chillings <4000 F and/or Visibility <6 M	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-00	1,979	0.8	18.0	32.2	35.5	1.2	8.3	0.9	5.4	1.1	13.1	9.2	7.7	3.3	1.1	17.0
03-05	1,981	1.2	19.0	33.1	34.7	1.5	8.2	0.6	5.4	1.1	13.9	13.4	7.8	3.3	1.1	20.8
06-08	1,981	1.4	22.3	35.2	34.8	0.6	7.6	0.6	5.6	1.1	13.5	17.7	7.7	6.6	1.1	25.2
09-11	1,981	1.1	21.9	36.5	36.7	0.4	6.6	0.5	5.3	1.1	14.0	12.4	5.5	7.7	1.1	18.3
12-14	1,978	0.4	19.7	36.2	33.4	0.4	8.2	0.3	5.5	1.1	13.6	8.7	2.7	3.3	1.1	12.1
15-17	1,981	0.5	15.3	31.5	31.6	0.6	7.5	0.5	4.6	1.1	10.3	7.8	2.8	2.2	1.1	11.3
18-20	1,981	0.5	14.8	28.0	33.3	1.1	7.0	0.4	4.9	1.1	12.2	7.8	5.8	1.1	1.1	13.7
21-23	1,981	0.8	16.2	30.7	33.4	1.8	8.1	0.4	5.5	1.1	13.8	8.3	7.5	3.3	0.9	16.8
All Hours 12,643	0.8	18.4	31.8	33.8	0.9	7.9	0.5	5.3	5.3	1.1	13.4	10.7	5.9	3.3	1.1	16.9

APRIL																
Hours	Number of Observations	Chillings <200 F and/or Visibility <1/2 M	Chillings <2000 F and/or Visibility <3 M	Chillings <4000 F and/or Visibility <6 M	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-00	1,980	1.3	12.9	23.3	47.9	2.6	10.0	1.0	10.0	1.0	10.2	8.9	2.7	1.1	1.1	11.6
03-05	1,980	2.0	16.0	26.0	42.7	2.0	9.8	1.0	10.3	1.0	10.3	11.5	3.2	1.1	1.1	14.7
06-08	1,980	1.2	18.0	34.2	30.0	1.8	10.3	1.0	10.3	1.0	11.1	13.9	4.8	1.1	1.1	18.9
09-11	1,980	1.1	16.8	30.3	27.1	1.2	8.2	0.7	7.7	1.0	8.8	6.5	2.7	1.1	1.1	9.2
12-14	1,980	1.1	13.7	29.6	23.8	1.3	8.4	0.8	8.4	1.0	9.2	4.2	1.4	1.1	1.1	5.9
15-17	1,980	1.1	11.2	25.0	24.1	1.0	7.8	0.8	8.4	1.0	8.2	4.1	1.4	1.1	1.1	5.7
18-20	1,980	0.2	10.5	23.0	32.5	3.1	9.5	0.8	8.4	1.0	9.9	5.2	2.5	1.1	1.1	8.1
21-23	1,980	0.3	10.5	21.7	43.3	3.1	10.5	0.8	8.4	1.0	10.7	6.5	3.3	1.1	1.1	10.0
All Hours 12,643	0.6	13.7	26.4	34.0	2.0	9.3	0.8	8.4	8.4	1.0	9.8	7.6	2.8	1.1	1.1	10.5

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 ... indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

WHITEMAN AFB, KNOB NOSTER, MISSOURI

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY												JUNE											
Hours	Number of Observations	Visibility - 1/2 MI.	Visibility - 3/4 MI.	Visibility - 1 MI.	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Blowing Rain and/or Drizzle	Freezing Rain and/or Drizzle	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of	Observations to Vision						
00-02	1,980	4	9.0	25.1	42.4	3.5	3.7	....	....	....	3.6	1.2	1.0	....	....	3.9	3.5	1.4	....	4.6
03-05	1,980	9	14.2	34.1	39.9	2.8	10.3	....	....	....	13.5	1.2	1.5	....	....	6.3	8.1	1.7	....	9.2
06-08	1,980	5	12.0	33.5	42.6	2.5	7.3	....	....	....	14.5	1.4	1.3	....	....	8.2	6.9	1.9	....	8.5
09-11	1,980	11	18.8	35.3	37.6	2.7	8.3	....	....	....	12.0	1.5	1.3	....	....	7.0	3.4	1.1	....	8.4
12-14	1,980	11	18.8	35.3	37.6	2.7	8.3	....	....	....	12.0	1.5	1.3	....	....	7.0	3.4	1.1	....	8.4
15-17	1,980	11	18.8	35.3	37.6	2.7	8.3	....	....	....	12.0	1.5	1.3	....	....	7.0	3.4	1.1	....	8.4
18-20	1,980	11	18.8	35.3	37.6	2.7	8.3	....	....	....	12.0	1.5	1.3	....	....	7.0	3.4	1.1	....	8.4
21-23	1,980	11	18.8	35.3	37.6	2.7	8.3	....	....	....	12.0	1.5	1.3	....	....	7.0	3.4	1.1	....	8.4
All Hours	16,944	3	9.8	26.9	33.7	2.9	8.0	....	....	....	11.0	1.3	1.3	....	....	6.3	3.5	1.3	....	8.7

JULY												AUGUST											
Hours	Number of Observations	Visibility - 1/2 MI.	Visibility - 3/4 MI.	Visibility - 1 MI.	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Blowing Rain and/or Drizzle	Freezing Rain and/or Drizzle	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of	Observations to Vision						
00-02	1,674	2	8.2	24.1	61.8	3.7	4.5	....	....	....	5.0	3.7	1.3	....	....	6.2	3.0	.9	....	3.9
03-05	1,674	7	4.9	34.3	51.9	5.4	5.6	....	....	....	10.4	7.7	2.9	....	....	7.1	7.4	1.5	....	8.8
06-08	1,674	4	6.5	36.0	37.5	3.7	7.2	....	....	....	11.4	6.1	3.5	....	....	6.4	8.7	3.8	....	12.1
09-11	1,673	....	5.1	30.9	35.7	1.0	3.6	....	....	....	3.6	1.1	1.6	....	....	4.4	2.2	1.9	....	3.9
12-14	1,673	....	8.9	11.6	29.1	1.4	2.9	....	....	....	2.9	.3	.7	....	....	3.9	1.3	.6	....	1.9
15-17	1,673	1.4	7.6	33.9	2.1	3.5	1.1	3.5	.3	.4	2.4	.6	.4	1.0		
18-20	1,672	1.7	5.9	42.6	2.9	3.5	1.1	3.5	.7	.4	3.2	.7	.9	1.6		
21-23	1,673	1.1	5.6	60.2	2.6	3.2	2.0	1.0	1.1	4.9	1.4	.5	2.0			
All Hours	13,386	2	3.2	32.1	44.8	2.9	4.2	4.2	2.8	1.5	4.8	3.1	1.3	4.4			

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 ... indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

WHITEMAN AFB, KNOB NOSTER, MISSOURI

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER													OCTOBER																		
Hours	Number of Observations	Wettable <0.007 in. and/or Viable <1.0 MI	Wettable <0.007 in. and/or Viable <1.0 MI	Wettable <0.007 in. and/or Viable <1.0 MI	Thunder (Wet or Within Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision	Hours	Number of Observations	Wettable <0.007 in. and/or Viable <1.0 MI	Wettable <0.007 in. and/or Viable <1.0 MI	Wettable <0.007 in. and/or Viable <1.0 MI	Thunder (Wet or Within Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-02	1,497	3	5.8	13.0	61.5	3.0	7.7	5.5	1.1	6.5	7.7	5.5	1.1	6.5	9.7	00-02	1,488	1.0	6.6	15.3	62.3	2.0	6.2	6.2	6.2	6.2	6.2	6.8	3.2	6.8	9.7
03-05	1,497	1.1	9.8	10.3	58.3	3.3	9.0	10.0	1.3	11.2	9.0	10.0	1.3	11.2	11.4	03-05	1,488	1.7	9.0	17.5	61.5	2.4	6.9	6.9	6.9	6.9	6.9	9.3	2.4	6.9	11.4
06-08	1,497	1.4	11.1	20.5	49.6	1.1	8.6	13.6	1.7	15.0	8.6	13.6	1.7	15.0	18.9	06-08	1,488	1.7	9.6	20.8	49.9	1.7	7.3	7.3	7.3	7.3	7.3	10.8	4.6	7.3	18.9
09-11	1,497	---	11.0	18.1	45.5	5	6.4	6.4	6.5	7.1	6.4	6.5	6.5	7.1	6.4	09-11	1,488	---	10.4	18.5	40.7	7	5.8	5.8	5.8	5.8	5.8	5.1	1.3	5.8	6.4
12-14	1,497	---	8.0	10.4	41.0	1.3	5.5	3.4	3	3.7	5.5	3.4	3	3.7	3.8	12-14	1,488	---	6.8	17.3	45.2	7	6.6	6.6	6.6	6.6	6.6	2.8	1.0	6.6	3.8
15-17	1,496	---	6.1	13.7	42.8	2.4	5.7	3.0	3	3.3	5.7	3.0	3	3.3	4.1	15-17	1,487	---	5.4	13.4	44.0	9	5.8	5.8	5.8	5.8	5.8	3.4	7	5.8	4.1
18-20	1,497	---	5.0	11.8	50.5	3.5	6.7	2.8	1.2	3.9	6.7	2.8	1.2	3.9	7.1	18-20	1,488	---	5.8	12.5	50.9	9	5.3	5.3	5.3	5.3	5.3	4.4	2.7	5.3	7.1
21-23	1,496	---	5.6	13.0	58.2	2.9	7.8	3.7	1.6	5.2	7.8	3.7	1.6	5.2	6.7	21-23	1,487	---	4	5.6	14.1	61.2	1.3	6.2	6.2	6.2	6.2	5.7	3.2	6.2	6.7
All Hours 11,276	4	7.8	16.0	50.9	2.2	7.2	6.1	1.0	7.0	7.0	6.1	1.0	7.0	8.2	All Hours 11,902	7	7.4	16.2	53.2	1.3	6.2	6.1	2.4	6.3	6.3	6.1	2.4	8.2			

NOVEMBER													DECEMBER																		
Hours	Number of Observations	Wettable <0.007 in. and/or Viable <1.0 MI	Wettable <0.007 in. and/or Viable <1.0 MI	Wettable <0.007 in. and/or Viable <1.0 MI	Thunder (Wet or Within Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision	Hours	Number of Observations	Wettable <0.007 in. and/or Viable <1.0 MI	Wettable <0.007 in. and/or Viable <1.0 MI	Wettable <0.007 in. and/or Viable <1.0 MI	Thunder (Wet or Within Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-02	1,440	---	10.0	19.8	54.4	7	5.5	2	1.4	9.9	5.5	3.5	3.5	2	9.9	00-02	1,578	2.5	23.9	34.1	46.5	1	6.2	1.4	5.8	6.2	1.4	5.8	5.8	5.8	19.2
03-05	1,438	---	12.4	22.7	54.3	5	5.7	1	1.7	10.5	5.7	2.5	2.5	1	10.5	03-05	1,577	3.0	26.5	37.3	47.5	1	5.1	1.0	6.5	5.1	1.0	6.5	6.5	6.5	19.9
06-08	1,438	---	16.0	28.4	43.6	1	5.3	1	1.4	16.7	5.3	1.2	1.2	1	16.7	06-08	1,577	2.8	27.8	41.2	30.7	---	5.1	1.7	7.2	5.1	1.7	7.2	7.2	7.2	25.2
09-11	1,439	---	15.7	25.7	36.2	2	4.9	1	1.5	10.2	4.9	2.9	2.9	1	10.2	09-11	1,577	2.3	26.1	35.9	35.0	1	4.7	1.0	7.6	4.7	1.0	7.6	7.6	7.6	28.5
12-14	1,440	---	12.6	24.1	39.0	1	5.5	1	1.4	9.9	5.5	1.1	1.1	1	9.9	12-14	1,578	1.4	23.4	33.7	34.4	1	4.8	1.0	6.0	4.8	1.0	6.0	6.0	6.0	15.5
15-17	1,440	---	9.7	21.2	41.5	2	5.3	2	1.3	6.5	5.3	2.0	2.0	2	6.5	15-17	1,577	1.0	21.2	31.4	29.0	1	4.4	1.3	4.5	4.4	1.3	4.5	4.5	4.5	14.6
18-20	1,439	---	9.9	19.2	49.0	4	5.4	---	1.8	8.4	5.4	3.7	3.7	2	8.4	18-20	1,579	1.6	19.7	33.1	31.0	2	5.2	1.0	4.6	5.2	1.0	4.6	4.6	4.6	10.3
21-23	1,440	---	9.2	18.0	53.0	---	5.4	1	1.5	9.2	5.4	4.1	4.1	1	9.2	21-23	1,576	3.4	20.0	32.2	44.4	1	6.3	1.8	4.4	6.3	1.8	4.4	4.4	4.4	18.5
All Hours 11,255	4	11.9	22.4	46.6	3	5.4	1	1.5	0	6.9	6.6	3.2	3.2	1	9.7	All Hours 12,616	2.2	23.3	34.9	38.4	1	5.2	1.2	5.8	5.2	1.2	5.8	5.8	5.8	19.0	

ANNUAL															
Hours	Number of Observations	Wettable <0.007 in. and/or Viable <1.0 MI	Wettable <0.007 in. and/or Viable <1.0 MI	Wettable <0.007 in. and/or Viable <1.0 MI	Thunder (Wet or Within Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
All Hours 149,395	0	12.3	22.5	41.4	1.6	6.4	3	2.1	0	8.7	7.9	3.5	2	11.2	

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

WHITEMAN AFB, KNOB NOSTER, MISSOURI WIND ROSES

JANUARY

Dir.	Speed in Knots						Total	Mean Speed
	<4	4-6	7-12	13-16	17-22	23-33		
N			3.4	2.6	4.6	0.0	9.4	9.4
NNE	5	1.0	1.9	1.2	1.1	0.0	4.7	4.7
NE	12	1.6	1.0	1.7	1.1	0.0	3.8	3.8
NNE	16	1.5	1.4	2.2	1.0	0.0	3.7	3.7
E	10	1.3	1.7	3.4	1.6	0.0	5.9	5.9
ESE	4	1.9	1.7	4.4	1.0	0.0	2.9	2.9
SE	15	1.3	1.6	4.1	1.7	0.0	4.1	4.1
SSE	16	2.1	2.0	3.8	2.7	0.0	9.1	9.1
S	11	1.6	2.0	2.6	2.7	0.0	7.9	7.9
SSW	7	1.6	3.0	2.0	3.5	1.0	7.8	7.8
SW	7	1.6	2.2	1.1	3.2	1.0	5.9	5.9
WSW	3	1.2	2.0	1.3	4.4	1.0	5.3	5.3
W	2	1.7	2.9	2.7	5.5	1.1	6.7	6.7
WSW	2	1.7	2.9	2.7	5.5	1.1	6.7	6.7
W	9.6						9.6	
WSW							9.6	
TOT	18.3	23.0	33.5	20.1	4.2	.0	100.0	7.9

TOTAL NUMBER OF OBSERVATIONS 12860

FEBRUARY

Dir.	Speed in Knots						Total	Mean Speed
	<4	4-6	7-12	13-16	17-22	23-33		
N			3.4	2.6	4.6	0.0	9.4	9.4
NNE	5	1.0	1.9	1.2	1.1	0.0	4.7	4.7
NE	12	1.6	1.0	1.7	1.1	0.0	3.8	3.8
NNE	16	1.5	1.4	2.2	1.0	0.0	3.7	3.7
E	10	1.3	1.7	3.4	1.6	0.0	5.9	5.9
ESE	4	1.9	1.7	4.4	1.0	0.0	2.9	2.9
SE	15	1.3	1.6	4.1	1.7	0.0	4.1	4.1
SSE	16	2.1	2.0	3.8	2.7	0.0	9.1	9.1
S	11	1.6	2.0	2.6	2.7	0.0	7.9	7.9
SSW	7	1.6	3.0	2.0	3.5	1.0	7.8	7.8
SW	7	1.6	2.2	1.1	3.2	1.0	5.9	5.9
WSW	3	1.2	2.0	1.3	4.4	1.0	5.3	5.3
W	2	1.7	2.9	2.7	5.5	1.1	6.7	6.7
WSW	2	1.7	2.9	2.7	5.5	1.1	6.7	6.7
W	9.6						9.6	
WSW							9.6	
TOT	18.3	23.0	33.5	20.1	4.2	.0	100.0	7.9

TOTAL NUMBER OF OBSERVATIONS 12860

MARCH

Dir.	Speed in Knots						Total	Mean Speed
	<4	4-6	7-12	13-16	17-22	23-33		
N			3.4	2.6	4.6	0.0	9.4	9.4
NNE	5	1.0	1.9	1.2	1.1	0.0	4.7	4.7
NE	12	1.6	1.0	1.7	1.1	0.0	3.8	3.8
NNE	16	1.5	1.4	2.2	1.0	0.0	3.7	3.7
E	10	1.3	1.7	3.4	1.6	0.0	5.9	5.9
ESE	4	1.9	1.7	4.4	1.0	0.0	2.9	2.9
SE	15	1.3	1.6	4.1	1.7	0.0	4.1	4.1
SSE	16	2.1	2.0	3.8	2.7	0.0	9.1	9.1
S	11	1.6	2.0	2.6	2.7	0.0	7.9	7.9
SSW	7	1.6	3.0	2.0	3.5	1.0	7.8	7.8
SW	7	1.6	2.2	1.1	3.2	1.0	5.9	5.9
WSW	3	1.2	2.0	1.3	4.4	1.0	5.3	5.3
W	2	1.7	2.9	2.7	5.5	1.1	6.7	6.7
WSW	2	1.7	2.9	2.7	5.5	1.1	6.7	6.7
W	9.6						9.6	
WSW							9.6	
TOT	18.3	23.0	33.5	20.1	4.2	.0	100.0	7.9

TOTAL NUMBER OF OBSERVATIONS 12860

APRIL

Dir.	Speed in Knots						Total	Mean Speed
	<4	4-6	7-12	13-16	17-22	23-33		
N			3.4	2.6	4.6	0.0	9.4	9.4
NNE	5	1.0	1.9	1.2	1.1	0.0	4.7	4.7
NE	12	1.6	1.0	1.7	1.1	0.0	3.8	3.8
NNE	16	1.5	1.4	2.2	1.0	0.0	3.7	3.7
E	10	1.3	1.7	3.4	1.6	0.0	5.9	5.9
ESE	4	1.9	1.7	4.4	1.0	0.0	2.9	2.9
SE	15	1.3	1.6	4.1	1.7	0.0	4.1	4.1
SSE	16	2.1	2.0	3.8	2.7	0.0	9.1	9.1
S	11	1.6	2.0	2.6	2.7	0.0	7.9	7.9
SSW	7	1.6	3.0	2.0	3.5	1.0	7.8	7.8
SW	7	1.6	2.2	1.1	3.2	1.0	5.9	5.9
WSW	3	1.2	2.0	1.3	4.4	1.0	5.3	5.3
W	2	1.7	2.9	2.7	5.5	1.1	6.7	6.7
WSW	2	1.7	2.9	2.7	5.5	1.1	6.7	6.7
W	9.6						9.6	
WSW							9.6	
TOT	18.3	23.0	33.5	20.1	4.2	.0	100.0	7.9

TOTAL NUMBER OF OBSERVATIONS 12860

WHITEMAN AFB, KNOB NOSTER, MISSOURI

WIND ROSES

MAY

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
Speed in Knots							
17-21 22-27 28-31 31-40 41-47 48-55 56							
TOTAL NUMBER OF OBSERVATIONS							
TOT	18.1	23.8	33.1	20.6	3.5	.6	2
TOTAL NUMBER OF OBSERVATIONS							
TOT	100.0	7.8	100.0	9.5			

JUNE

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
Speed in Knots							
17-21 22-27 28-31 31-40 41-47 48-55 56							
TOTAL NUMBER OF OBSERVATIONS							
TOT	26.2	26.7	30.6	13.9	2.1	.5	.0
TOTAL NUMBER OF OBSERVATIONS							
TOT	100.0	6.5	100.0	12.9			

JULY

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
Speed in Knots							
17-21 22-27 28-31 31-40 41-47 48-55 56							
TOTAL NUMBER OF OBSERVATIONS							
TOT	31.4	29.2	30.5	8.4	.5	.1	.0
TOTAL NUMBER OF OBSERVATIONS							
TOT	100.0	5.6	100.0	13.0			

AUGUST

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
Speed in Knots							
17-21 22-27 28-31 31-40 41-47 48-55 56							
TOTAL NUMBER OF OBSERVATIONS							
TOT	30.2	27.8	31.2	9.9	.8	.1	.0
TOTAL NUMBER OF OBSERVATIONS							
TOT	100.0	5.8	100.0	16.7			

**CHERRY POINT MCAS
HAVELOCK, NORTH CAROLINA
(Lat. 34°54'N, Long. 76°53'W, Elev. 29 ft.)**

Cherry Point MCAS is located on the southeastern coast of North Carolina. The airfield is on the northern side of a peninsula formed by the Neuse River and Pamlico Sound on the north, and the Atlantic Ocean 15 miles to the south. The surrounding area is mostly heavily wooded lowlands and swamps.

Overall, climatic conditions are quite moderate in the Cherry Point area because of the nearness of the Atlantic Ocean. Winds from the southeast usually result in night and morning stratus or fog, with maximum occurrence from November through February. Ground fog will usually form with light northwesterly winds. Under a northeasterly flow, stratus rather than ground fog generally occurs. Frontal activity is most intense during the winter and early spring.

Thunderstorms occur in all months of the year with the maximum frequency occurring during the summer months. Surface winds may reach hurricane force in severe thunderstorms. The occurrence of hail is rare. Tornadoes and waterspouts have been reported along the coast.

Hurricanes may affect the area from August through October with the maximum frequency occurring in September.

Flying conditions are generally good with the best conditions occurring in July and the poorest in January.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from April 1945-March 1969.

CHERRY POINT MCAS HAVELOCK, NORTH CAROLINA

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	55.2	56.6	62.4	72.2	79.3	84.6	87.6	87.0	82.1	73.6	65.2	56.7	71.9
Mean	46.0	47.2	52.7	62.2	70.0	76.3	79.9	79.3	74.5	64.9	55.5	47.1	63.0
Minimum	36.3	37.2	42.7	51.7	60.3	67.5	71.6	71.2	66.4	55.8	45.2	37.1	53.6

Record Temperature Extremes

Maximum	80	84	90	93	98	104	101	101	100	95	86	80
Minimum	10	12	20	30	33	44	56	57	46	26	18	14
	Period of Record: 1945-1969											

MONTHLY MEANS

Precipitation (Inches)

Precipitation	3.31	3.87	3.08	2.49	4.04	5.30	8.42	6.35	6.33	3.35	3.33	3.24	53.11
Snowfall*	.5	.7	.5	.0	.0	.0	.0	.0	.0	.0	T	.5	2.2
	(*Hail was included in Snowfall Period of Record: Precipitation 1945-1969 Snowfall 1949-1968)												

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	SW	SSW	WNW	SW	NW	NNW	NNE	NE	SSW	NNE	SSW	
Velocity	50	57	59	70	56	70	57	90	93	76	51	59
	Period of Record: 1945-1969											

Maximum and/or Minimum Anemometer Height: 90 feet 04/45; 12 feet 10/59

CHERRY POINT MCAS, HAVELOCK, NORTH CAROLINA

Percentage Frequencies of Occurrence of Specified Weather Conditions

FEBRUARY																
Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <1/2 MI	Occurrences <2000 Ft and/or Visibility <3 MI	Occurrences <4000 Ft and/or Visibility <6 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-02	2,131	3.4	20.9	37.2	44.8	.2	11.3	.4	.6	....	12.2	20.9	15.8	....	....	35.1
03-05	2,232	4.4	22.1	39.0	43.7	.4	10.9	.7	1.2	....	12.3	23.8	16.8	.1	....	38.7
06-08	2,232	4.5	23.0	43.3	35.3	.2	11.3	.5	1.0	....	12.5	27.5	24.2	.3	....	47.5
09-11	2,232	1.1	19.6	34.2	33.5	....	10.7	.6	1.2	....	11.9	15.3	24.7	.1	....	38.6
12-14	2,231	.3	19.8	29.7	31.6	.0	11.1	.6	.9	....	12.3	9.1	15.4	....	....	24.0
15-17	2,232	.2	16.5	28.8	32.1	.2	11.1	.3	.7	....	11.8	8.5	14.5	....	....	22.5
18-20	2,231	1.3	18.7	31.1	39.7	.2	10.8	.3	.9	....	11.7	12.0	15.9	....	....	27.1
21-23	2,230	2.5	19.4	33.3	43.8	.3	11.8	.4	.6	....	12.8	16.5	17.1	....	....	32.2
All Hours 17,869	2.2	20.3	34.6	38.1	.2	11.1	.5	.9	....	....	12.2	16.7	18.1	.1	....	33.2

MARCH																
Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <1/2 MI	Occurrences <2000 Ft and/or Visibility <3 MI	Occurrences <4000 Ft and/or Visibility <6 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-02	2,232	2.4	17.4	32.5	40.9	.3	9.9	....	.2	....	10.1	15.9	16.8	....	.4	31.7
03-05	2,232	2.9	20.1	38.2	46.3	.2	10.5	.0	.3	....	10.0	21.6	18.3	....	.2	37.5
06-08	2,231	2.3	22.6	41.8	35.0	.3	10.3	....	.4	....	10.7	26.4	25.2	....	....	46.5
09-11	2,232	.7	18.9	31.0	34.3	.4	9.0	....	.4	....	9.3	9.7	18.1	....	.1	27.2
12-14	2,232	.2	13.1	25.3	32.8	.3	8.6	....	.4	.0	9.1	6.0	11.7	....	.6	18.0
15-17	2,232	.3	13.4	25.1	31.7	.2	8.8	....	.6	....	9.4	5.7	10.4	....	.7	16.5
18-20	2,232	.7	14.6	24.8	39.0	.4	8.8	.1	.2	....	9.1	7.9	14.1	....	.7	22.1
21-23	2,232	1.6	15.9	27.5	48.1	.2	8.9	....	.2	....	9.1	11.8	15.9	....	.4	27.4
All Hours 17,895	1.4	17.0	31.3	39.6	.3	9.4	.0	.3	.0	....	9.7	13.1	16.3	....	.4	28.4

APRIL																
Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <1/2 MI	Occurrences <2000 Ft and/or Visibility <3 MI	Occurrences <4000 Ft and/or Visibility <6 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
00-02	2,157	1.5	14.7	30.4	50.1	.4	7.5	....	....	....	7.5	14.6	22.0	....	.2	34.5
03-05	2,157	2.4	17.9	36.6	48.8	.2	7.6	....	....	....	7.6	25.2	22.3	....	.1	43.3
06-08	2,157	1.4	18.9	36.5	39.2	.3	7.0	....	....	....	7.0	21.3	27.8	....	....	43.4
09-11	2,157	.2	14.0	28.5	37.3	.5	7.5	....	....	....	7.5	5.0	13.3	....	....	18.1
12-14	2,157	....	9.0	27.4	31.6	.4	6.3	....	....	....	6.3	2.6	9.8	....	.6	12.9
15-17	2,157	....	8.4	22.8	31.4	.8	7.3	....	....	....	7.3	2.1	9.1	....	.8	12.5
18-20	2,157	....	9.1	21.6	44.0	1.1	7.0	....	....	....	7.0	4.1	13.7	....	.7	18.3
21-23	2,156	.3	11.6	24.7	52.0	1.0	7.3	....	....	....	7.3	8.3	17.6	....	.2	26.3
All Hours 17,255	.7	13.0	29.1	41.7	.6	7.2	....	....	....	....	7.2	10.5	17.0	....	.3	26.0

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

CHERRY POINT MCAS, HAVELOCK, NORTH CAROLINA

Percentage Frequencies of Occurrence of Specified Weather Conditions

JUNE															
Hours	Number of Observations	Wetness (1/20 to 1/200 Ft and/or Visibility < 3 MI)	Wetness (1/20 to 1/200 Ft and/or Visibility < 3 MI)	Wetness (1/20 to 1/200 Ft and/or Visibility < 3 MI)	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-00	2,166	6	14.3	20.4	47.4	1.2	6.3	---	---	6.5	17.6	34.2	---	---	47.3
01-05	2,166	2.0	22.4	34.4	36.4	1.3	6.4	---	---	6.6	35.6	36.3	---	---	61.3
06-08	2,159	6	19.6	46.5	27.2	1.3	5.1	---	---	5.3	21.1	38.1	---	---	54.4
09-11	2,157	---	17.4	39.7	22.6	1.5	6.1	---	---	6.0	2.7	26.3	---	0	24.9
12-14	2,167	2	14.5	41.1	14.8	3.4	3.4	---	1	5.3	0.6	16.0	---	---	18.2
15-17	2,166	1	11.7	37.5	13.2	3.4	3.4	---	---	5.3	2.5	14.8	---	---	17.3
18-20	2,166	2	20.4	26.5	27.0	3.1	8.3	---	---	6.5	5.5	22.4	---	---	24.6
21-23	2,166	2	11.0	35.1	42.0	2.0	6.1	---	---	6.5	8.2	30.0	---	---	36.1
All Hours	17,278	5	15.2	35.9	29.6	1.9	7.2	---	0	7.3	11.7	26.6	---	0	31.3

AUGUST															
Hours	Number of Observations	Wetness (1/20 to 1/200 Ft and/or Visibility < 3 MI)	Wetness (1/20 to 1/200 Ft and/or Visibility < 3 MI)	Wetness (1/20 to 1/200 Ft and/or Visibility < 3 MI)	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
01-02	2,232	3	11.2	43.9	47.1	2.2	5.1	---	---	5.0	12.6	40.0	---	---	51.8
03-05	2,232	12	19.9	50.6	43.6	1.3	5.2	---	---	5.3	25.9	41.6	---	---	63.8
06-08	2,232	1.1	23.0	54.5	28.0	1.3	4.8	---	---	4.8	31.3	46.0	---	---	63.2
09-11	2,232	1	16.9	46.4	22.7	1.0	7.1	---	---	7.1	1.9	31.3	---	---	36.5
12-14	2,232	3	14.9	47.2	13.3	4.1	10.9	---	---	11.9	1.9	23.3	---	---	28.4
15-17	2,232	4	12.0	33.8	19.0	5.4	12.6	---	---	11.6	2.5	22.1	---	0	22.3
18-20	2,232	4	10.3	39.4	27.5	3.4	9.0	---	---	9.0	4.8	27.3	---	---	31.0
21-23	2,232	1	9.1	36.2	41.0	2.3	6.7	---	---	6.7	10.2	36.3	---	---	43.1
All Hours	17,556	5	14.9	43.4	30.1	2.5	7.5	---	---	7.5	13.5	33.5	---	0	42.1

JULY															
Hours	Number of Observations	Wetness (1/20 to 1/200 Ft and/or Visibility < 3 MI)	Wetness (1/20 to 1/200 Ft and/or Visibility < 3 MI)	Wetness (1/20 to 1/200 Ft and/or Visibility < 3 MI)	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
01-02	2,232	2	10.3	33.9	43.5	2.1	7.3	---	---	7.3	14.4	31.4	---	---	47.7
03-05	2,232	1	15.6	44.5	36.5	2.1	7.1	---	---	7.1	20.1	36.9	---	---	51.3
06-08	2,232	1	18.5	42.4	23.6	1.5	7.1	---	---	7.1	18.4	34.4	---	---	44.6
09-11	2,232	---	19.6	41.5	17.6	1.1	6.3	---	---	6.3	2.1	21.3	---	1	22.0
12-14	2,232	3	15.9	44.6	10.4	4.3	11.6	---	---	11.6	1.7	14.0	---	1	15.8
15-17	2,232	1	10.5	30.1	15.5	6.3	16.5	---	---	12.0	1.5	13.8	---	1	19.4
18-20	2,232	3	9.5	23.9	22.9	3.5	10.3	---	---	11.9	3.3	12.8	---	1	21.4
21-23	2,232	---	3.3	26.1	34.1	2.7	5.1	---	---	9.0	6.6	25.7	---	---	30.4
All Hours	17,556	3	13.7	36.1	26.1	3.1	9.4	---	---	9.0	9.0	24.0	---	1	30.3

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

CHERRY POINT MCAS, HAVELOCK, NORTH CAROLINA

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER														OCTOBER													
Hours	Number of Observations	Callings <200 Ft and/or Visibility <1/2 MI	Callings <200 Ft and/or Visibility <3 MI	Callings <2000 Ft and/or Visibility <2 MI	Callings <4000 Ft and/or Visibility <5 MI	Cloud Cover <3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision										
00-02	2,159	.8	15.0	42.1	50.8	.6	8.1	....	....	....	....	0.1	13.4	39.6	....	....	44.8				
03-05	2,160	2.7	23.0	54.4	47.0	.9	8.7	....	....	....	0.7	33.2	30.8	....	....	....	56.8				
06-08	2,159	2.3	20.2	56.0	50.3	.6	6.8	....	....	....	1.1	33.1	38.4	....	....	....	59.0				
09-11	2,160	1.1	21.9	43.1	36.3	.6	7.7	....	....	....	1.7	4.5	27.4	....	....	....	30.8				
12-14	2,159	1.1	12.6	30.6	20.3	1.4	8.9	....	....	....	0.9	2.4	20.0	....	....	....	22.3				
15-17	2,160	1.1	17.0	43.2	26.3	1.9	9.1	....	....	....	2.1	2.0	17.3	....	....	....	19.1				
18-20	2,160	1.1	12.5	30.4	37.3	1.7	8.9	....	....	....	0.9	4.1	23.2	....	....	....	26.4				
21-23	2,158	.2	12.4	33.1	40.3	.9	8.0	....	....	....	5.0	9.2	28.1	....	....	....	34.2				
All Hours 17,275		.8	17.9	41.6	36.0	1.1	8.5	....	....	....	5.9	13.5	27.2	....	....	....	36.8				

NOVEMBER														DECEMBER													
Hours	Number of Observations	Callings <200 Ft and/or Visibility <1/2 MI	Callings <2000 Ft and/or Visibility <2 MI	Callings <4000 Ft and/or Visibility <3 MI	Callings <6000 Ft and/or Visibility <5 MI	Cloud Cover <3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision										
00-02	2,160	2.3	18.0	39.3	54.0	.3	7.9	....	....	....	....	8.5	24.4	22.3	....	....	42.1				
03-05	2,160	3.9	21.7	45.5	54.0	.1	9.5	....	....	....	....	7.9	31.6	22.8	....	....	48.6				
06-08	2,159	2.7	22.1	50.0	44.9	.3	8.9	....	....	....	....	8.9	30.1	31.0	....	....	54.9				
09-11	2,160	.7	14.3	30.5	43.6	.1	8.4	....	....	....	....	1.9	9.8	29.7	....	....	33.5				
12-14	2,160	....	12.2	24.3	46.0	.2	7.0	....	....	....	....	1.1	4.4	14.5	....	....	18.5			
15-17	2,160	1.1	10.8	20.1	41.3	....	7.2	....	....	....	....	1.2	4.5	12.9	....	....	17.1			
18-20	2,160	.7	11.4	24.4	50.6	.1	6.8	....	....	....	....	6.9	7.4	18.3	....	....	25.0				
21-23	2,160	1.3	13.9	30.1	54.9	.4	6.7	....	....	....	....	6.2	14.8	20.2	....	....	32.7				
All Hours 17,279		1.5	15.6	33.0	48.0	.2	7.8	....	....	....	....	7.9	16.4	21.0	....	....	34.1				

ANNUAL																	
Hours	Number of Observations	Callings <200 Ft and/or Visibility <1/2 MI	Callings <2000 Ft and/or Visibility <2 MI	Callings <4000 Ft and/or Visibility <3 MI	Callings <6000 Ft and/or Visibility <5 MI	Cloud Cover <3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
All Hours 210,338		.9	14.5	35.7	37.5	1.0	8.6	....	....	....	....	8.8	13.6	22.3	....	....	33.1

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 ... indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

SEYMOUR-JOHNSON AFB
GOLDSBORO, NORTH CAROLINA
(Lat. 35°20'N, Long. 77°58'W, Elev. 88 ft.)

Seymour-Johnson AFB is located three miles southeast of Goldsboro, in the middle of the Atlantic Coastal Plain. Terrain within a 25 mile radius of the airfield is almost flat. Most of the land is used for farming; however, there are many swampy areas, particularly along the Neuse River which lies to the southwest of the airfield.

Weather conditions in this area are influenced heavily by the warm waters of the Gulf Stream as it flows northeast along the North Carolina coast. During the summer months, southeast winds of the Bermuda High bring warm moist air inland which is cooled at night to produce low stratus or fog and heated during the day resulting in cumulus or cumulonimbus cloud development.

In winter the warm moist air over the Gulf Stream acts to intensify activity along advancing cold fronts. Quite often these cold fronts become stationary off the coast, allowing the warm moist air to overrun the cold dry air, thus prolonging the existence of low ceilings and visibilities associated with the front.

Ceilings and visibilities are controlled primarily by the above-mentioned meteorological conditions. Occasionally low visibilities are caused by the ever present industrial air pollutants.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from June 1943-July 1946, April 1954 and January 1957-December 1966; with the exception of cloud cover for which data are not available prior to 1946.

SEYMOUR-JOHNSON AFB GOLDSBORO, NORTH CAROLINA

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Maximum	51.9	55.0	62.3	73.8	81.0	85.8	87.6	86.6	82.5	72.6	64.4	52.4	71.1
Mean	42.3	45.2	52.3	62.5	70.4	76.2	78.9	78.1	73.6	61.9	53.6	43.2	61.3
Minimum	32.3	35.1	41.9	51.0	59.6	66.2	69.9	69.3	64.3	50.9	42.4	33.7	51.1

Record Temperature Extremes

Maximum	81	81	89	95	97	104	100	99	98	90	84	74
Minimum	6	12	20	31	35	47	54	56	47	25	25	10
Period of Record: 1943-1946, 1954, 1957-1965												

MONTHLY MEANS

Precipitation	Precipitation (Inches)												
	3.59	4.52	3.69	3.04	3.08	5.22	7.22	6.26	5.66	3.09	2.96	3.36	51.68
Snowfall*	2.3	.9	1.1	.0	.0	.0	.0	.0	.0	.0	.0	T	1.9
(*Hail was included in Snowfall Period of Record: 1943-1946, 1957-1965 Summary prior to January 1956) Snowfall 1946, 1957-1965													

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	W	WSW	WSW	S	S	W	NE	WSW	N	NNW	WSW	SW
Velocity	47	51	50	56	42	40	44	36	37	32	46	41
Period of Record: 1959-1965												

Maximum and/or Minimum Anemometer Height: 110 feet 03/59; 13 feet 11/60

SEYMOUR-JOHNSON AFB, GOLDSBORO, NORTH CAROLINA

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY														FEBRUARY													
Hours	Number of Observations	Callings <200 Ft and/or Visibility <1/2 MI	Callings <2000 Ft and/or Visibility <1/2 MI	Callings <2000 Ft and/or Visibility <3 MI	Callings <4000 Ft and/or Visibility <6 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision										
00-01	1,200	2.7	28.7	37.6	47.9	...	9.7	1.3	1.3	...	11.6	16.7	16.9	...	...	...	31.4							
03-05	1,200	2.5	24.1	40.9	46.5	...	1.0	0.0	1.6	...	13.3	18.6	18.5	...	...	...	34.7							
06-08	1,200	3.3	27.0	45.5	30.6	...	1.4	1.1	1.4	...	12.9	20.7	24.0	...	...	...	39.0							
09-11	1,200	1.0	23.1	39.3	33.7	...	10.2	0.0	2.3	...	13.1	14.2	23.8	...	...	...	35.3							
12-14	1,200	...	19.7	31.9	34.4	...	0.6	1.0	2.3	...	19.6	4.0	16.3	...	...	...	23.4							
15-17	1,200	...	17.7	30.1	50.1	...	9.9	0.0	1.9	...	11.3	9.5	17.1	...	...	...	24.7							
18-20	1,200	...	17.1	38.3	40.1	...	9.9	0.6	1.6	...	11.9	10.9	28.0	...	...	...	30.1							
21-23	1,200	1.2	17.2	33.0	44.8	...	11.4	0.6	1.9	...	13.7	12.3	30.0	...	...	...	28.7							
All Hours	9,600	1.4	26.8	36.4	40.1	...	9.9	0.8	1.8	...	12.1	14.2	26.1	...	...	...	30.7							

MARCH														APRIL													
Hours	Number of Observations	Callings <200 Ft and/or Visibility <1/2 MI	Callings <2000 Ft and/or Visibility <1/2 MI	Callings <2000 Ft and/or Visibility <3 MI	Callings <4000 Ft and/or Visibility <6 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision										
00-02	1,200	1.4	15.2	28.9	47.8	...	3	11.7	1	...	12.0	11.5	12.2	...	...	...	22.3							
03-05	1,200	2.6	18.4	31.9	47.2	...	3	11.7	...	...	12.2	17.4	12.2	...	...	...	27.7					
06-08	1,200	2.8	24.2	39.5	36.0	...	2	10.9	...	...	11.5	21.8	16.9	...	...	...	34.3					
09-11	1,200	...	18.3	29.8	34.5	...	1	10.1	...	...	10.9	11.1	10.9	...	...	...	21.3					
12-14	1,200	...	15.8	26.4	32.6	...	9.9	...	...	...	12.4	8.3	7.7	...	...	...	15.9				
15-17	1,200	...	13.1	21.0	32.2	...	5	9.9	...	...	10.6	6.3	8.1	...	...	...	14.2					
18-20	1,200	...	11.8	23.8	37.6	...	4	9.3	...	...	7.0	7.6	10.8	...	...	...	18.4					
21-23	1,200	...	12.9	25.0	44.4	...	2	10.4	...	...	11.2	9.0	11.2	...	...	...	19.3					
All Hours	9,600	1.0	16.2	28.6	39.7	...	3	10.5	...	...	11.1	11.6	11.3	...	...	...	21.7					

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

SEYMOUR-JOHNSON AFB, GOLDSBORO, NORTH CAROLINA

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER													OCTOBER																			
Hours	Number of Observations	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SMI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Cloud Cover (%)	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SMI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,170	9	13.2	13.6	50.9	.7	7.3	....	....	7.3	16.2	18.4	....	....	31.5	00-02	1,209	2.5	17.9	37.4	59.3	.4	7.1	....	....	....	7.1	23.4	18.7	....	....	35.7
03-05	1,170	3.8	26.6	50.9	55.4	.7	8.1	....	....	8.1	33.6	19.8	....	....	47.3	03-05	1,209	4.8	25.2	47.1	50.1	.1	7.5	....	....	....	7.5	35.2	19.9	....	....	45.5
06-08	1,170	5.2	36.8	58.4	59.1	....	7.3	....	....	7.3	43.1	28.7	....	..	57.6	06-08	1,209	4.9	34.4	54.1	46.0	....	8.5	....	....	....	8.5	41.9	26.4	....	....	49.3
09-11	1,170	1	20.7	44.0	36.3	.1	6.6	....	....	6.4	7.1	16.3	....	....	22.6	09-11	1,209	3	17.3	30.3	47.4	....	5.7	....	....	....	5.7	18.3	17.4	....	....	28.5
12-14	1,170	....	9.7	28.7	27.2	.4	7.4	....	....	7.4	2.1	8.6	....	....	10.8	12-14	1,208	1	9.5	21.8	45.1	.1	6.0	....	....	....	6.0	3.9	8.2	....	....	11.3
15-17	1,170	2	9.1	22.2	30.2	2.8	10.4	....	....	10.4	3.7	9.3	....	....	13.0	15-17	1,208	....	7.9	17.5	48.1	.2	5.9	....	....	....	5.9	2.6	7.5	....	....	9.9
18-20	1,166	....	9.4	28.2	39.9	2.2	9.9	....	....	9.9	5.3	15.3	....	....	19.7	18-20	1,208	2	9.1	22.5	51.4	.3	7.0	....	....	....	7.0	5.0	16.8	....	....	20.9
21-23	1,166	1	11.1	24.3	56.0	.9	7.5	....	....	7.5	7.5	15.7	....	....	22.0	21-23	1,209	2	11.2	27.7	50.9	.3	7.7	....	....	....	7.7	12.8	10.8	....	....	27.0
All Hours	9,352	1.3	17.3	34.6	42.4	1.0	8.1	....	....	8.1	14.6	16.0	....	..	22.1	All Hours	9,669	1.6	16.2	32.3	51.0	.2	6.9	....	....	....	6.9	17.1	16.6	....	....	28.9

NOVEMBER													DECEMBER																			
Hours	Number of Observations	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SMI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Cloud Cover (%)	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SMI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,170	2.5	15.4	35.0	55.5	.3	7.3	....	....	7.4	10.3	17.6	....	....	32.5	00-02	1,168	2.7	15.8	28.7	55.1	.1	10.4	.2	.3	....	10.9	13.7	11.0	....	....	22.7
03-05	1,170	3.6	20.1	39.6	55.6	.1	7.9	....	....	7.9	23.4	17.5	....	....	35.7	03-05	1,170	2.8	16.9	22.1	53.8	.1	10.2	.4	.7	....	11.2	17.4	11.7	....	....	26.6
06-08	1,170	3.4	26.1	47.4	42.9	.2	9.4	....	....	9.4	33.0	24.7	....	....	48.0	06-08	1,170	3.2	20.3	30.2	41.8	....	9.8	.7	.8	....	11.1	20.9	18.1	....	....	34.1
09-11	1,170	1.0	15.2	31.5	46.8	.1	7.0	....	....	7.0	11.2	20.3	....	....	29.5	09-11	1,170	.9	16.7	30.7	37.6	.2	10.2	.5	.8	....	11.1	12.1	17.4	....	....	27.4
12-14	1,170	....	20.5	25.2	35.6	.1	6.0	....	....	6.0	4.5	11.7	....	....	15.7	12-14	1,169	.3	15.7	24.8	38.0	.1	9.8	.6	1.0	....	11.4	7.4	9.3	....	....	15.6
15-17	1,170	....	18.5	22.1	36.2	.1	5.1	....	....	5.3	3.0	13.9	....	....	16.9	15-17	1,170	.3	13.2	24.5	36.7	.1	10.2	.3	1.1	....	11.5	8.0	9.1	....	....	15.9
18-20	1,170	1	11.0	26.2	45.9	.2	6.4	....	....	6.5	5.1	17.8	....	....	22.1	18-20	1,170	1.1	13.7	25.4	44.3	.1	9.8	.3	.7	....	10.7	10.0	10.5	....	....	18.9
21-23	1,170	1.0	12.4	27.2	52.6	.2	6.8	....	....	6.9	9.1	18.0	....	....	24.7	21-23	1,170	1.1	15.4	25.6	49.5	.2	10.6	.4	.3	....	11.3	12.1	9.5	....	....	20.0
All Hours	9,360	1.5	14.9	31.8	45.6	1.1	7.0	....	....	7.1	13.6	17.7	....	....	28.1	All Hours	9,357	1.5	16.0	28.8	44.6	.1	10.1	.4	.7	....	11.1	12.7	12.1	....	....	22.6

ANNUAL															
Hours	Number of Observations	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Clouds <200 Ft and/or Visibility <3 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SMI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
All Hours	115,240	1.1	15.7	31.3	39.2	.9	8.4	.1	.3	8.8	12.8	14.8	.0	.1	25.1

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 ... indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

SEYMOUR-JOHNSON AFB, GOLDSBORO, NORTH CAROLINA WIND ROSES

JANUARY

Dir.	Speed in Knots											Total	Mean Wind Speed				
	0-3	4-6	7-11	12-16	17-21	22-27	28-33	34-42	43-47	48-55	56						
Dir.	1.4	2.5	2.5	1.0	1.0	0	0	0	0	0	0	0	0	0	0	6.7	7.3
NE	1.9	2.0	2.0	1.8	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	6.5	6.8
ESE	1.6	1.4	1.4	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	3.8	6.4
ESE	1.5	1.6	1.6	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.8	5.7
SSE	1.6	1.6	1.6	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.7	5.9
S	1.1	1.5	1.5	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	5.8	7.7
SSW	1.6	1.6	1.6	1.4	1.6	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	4.8	6.9
SW	1.1	1.4	1.4	1.4	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	5.0	9.1
WSW	1.5	2.6	2.4	1.5	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	8.0	6.6
W	1.1	2.0	2.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	7.1	8.9
WNW	1.1	2.0	2.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	7.1	8.9
W	1.6	1.7	1.4	1.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	4.9	6.1
WSW	20.7															16.7	
TOT	35.6	27.0	23.1	11.3	8.0	.6	.2	.1	.1	1.2	1.1	.0	.0	.0	.0	100.0	6.5
	TOTAL NUMBER OF OBSERVATIONS															9998	

FEBRUARY

Dir.	Speed in Knots											Total	Mean Wind Speed				
	0-3	4-6	7-11	12-16	17-21	22-27	28-33	34-42	43-47	48-55	56						
Dir.	1.0	2.2	2.5	.9	.1	0	0	0	0	0	0	0	0	0	0	6.7	7.3
NE	.9	2.2	2.5	.9	.1	0	0	0	0	0	0	0	0	0	0	6.5	6.8
ESE	1.6	1.6	1.4	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.8	6.4
ESE	1.7	1.6	1.5	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.8	5.7
SSE	1.7	1.6	1.6	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.7	5.9
S	1.1	1.5	1.5	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	5.8	7.7
SSW	1.5	1.5	1.5	1.4	1.0	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4.8	6.9
SW	1.1	1.4	1.4	1.4	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	5.0	9.1
WSW	1.2	2.6	2.6	1.7	1.5	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8.0	6.6
W	1.1	2.1	2.2	1.3	1.4	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	7.1	8.9
WNW	1.1	2.1	2.2	1.3	1.4	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	7.1	8.9
W	.6	1.4	1.7	1.8	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	4.9	6.1
WSW	16.7															16.7	
TOT	29.2	27.8	26.2	12.3	3.1	1.2	.1	.0	.0	1.2	1.1	.0	.0	.0	.0	100.0	6.5
	TOTAL NUMBER OF OBSERVATIONS															9875	

MARCH

Dir.	Speed in Knots											Total	Mean Wind Speed				
	0-3	4-6	7-11	12-16	17-21	22-27	28-33	34-46	47-55	56							
Dir.	1.9	1.9	2.4	.7	2	0	0	0	0	0	0	0	0	0	0	6.0	7.7
NE	1.3	1.3	2.1	.8	2	0	0	0	0	0	0	0	0	0	0	5.6	7.6
ESE	1.6	1.4	1.2	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4.1	6.4
ESE	1.6	1.4	1.2	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.6	6.2
SSE	1.6	1.4	1.2	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.6	6.2
S	1.1	1.5	1.7	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	3.7	6.6
SSW	1.6	1.5	2.4	1.6	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	4.7	7.4
SW	1.1	1.4	1.4	1.4	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	6.7	9.3
WSW	1.2	1.5	1.8	1.2	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	5.2	9.6
W	1.5	2.6	2.6	1.8	1.5	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6.6	8.9
WNW	1.1	2.1	2.2	1.3	1.4	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	6.9	8.7
W	1.1	2.1	2.2	1.3	1.4	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	6.9	8.7
WSW	1.5	1.2	1.5	1.5	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.3	7.6
WSW	14.4															14.4	
TOT	26.0	25.9	29.1	14.6	3.2	.9	.2	.1	.0	1.0	.0	.0	.0	.0	.0	100.0	6.9
	TOTAL NUMBER OF OBSERVATIONS															9671	

APRIL

Dir.	Speed in Knots											Total	Mean Wind Speed				
	0-3	4-6	7-11	12-16	17-21	22-27	28-33	34-46	47-55	56							
Dir.	1.8	2.0	1.9	.7	1.1	0	0	0	0	0	0	0	0	0	0	5.5	7.3
NE	1.3	1.7	1.7	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.4	7.2
ESE	1.5	1.4	1.2	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.3	6.8
ESE	1.5	1.4	1.2	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.3	6.8
SSE	1.5	1.4	1.2	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.3	6.8
S	1.1	1.7	1.1	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	4.4	8.4
SSW	1.1	1.7	1.1	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	4.4	8.4
SW	1.5	2.2	3.3	1.9	1.4	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8.5	9.1
WSW	1.2	2.2	2.8	1.6	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	10.1	9.3
W	1.5	2.6	2.6	1.5	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.8	8.3
WNW	1.1	2.1	2.2	1.3	1.4	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	3.5	8.3
W	1.1	2.1	2.2	1.3	1.4	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	3.5	8.3
WSW	.3	1.8	1.3	1.6	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.1	8.2
WSW	12.5															12.5	
TOT	22.9	27.4	30.2	15.5	2.9	.9	.1	.0	.0	1.0	.0	.0	.0	.0	.0	100.0	7.1
	TOTAL NUMBER OF OBSERVATIONS															9626	

SEYMOUR-JOHNSON AFB, GOLDSBORO, NORTH CAROLINA WIND ROSES

		MAY										TOTAL NUMBER OF OBSERVATIONS		1972	
		Speed in Knots		17-21		22-27		28-31		31-40						41-47		48-55		Total
Dir.		0-3	4-6	7-10	11-16	17-21	22-27	28-31	31-40	41-47	48-55	Total		Mean Speed	
N	NE	1.9	1.6	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
E	ESE	1.9	1.6	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
S	SSE	1.9	1.6	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
SE	ENE	1.9	1.6	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
SW	WSW	1.9	1.6	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
W	WNW	1.9	1.6	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
NW	NNW	1.9	1.6	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
WIND	DIR.	1.9	1.6	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
CALM		1.9	1.6	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
TOT		14.0	27.6	32.2	26.4	10.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
												100.0	5.9		
												100.0	5.9		

		JUNE										TOTAL NUMBER OF OBSERVATIONS		1969	
		Speed in Knots		17-21		22-27		28-31		31-40						41-47		48-55		Total
Dir.		0-3	4-6	7-10	11-16	17-21	22-27	28-31	31-40	41-47	48-55	Total		Mean Speed	
N	NE	1.6	2.1	1.4	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	ESE	1.6	2.1	1.4	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
S	SSE	1.6	2.1	1.4	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
SE	ENE	1.6	2.1	1.4	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
SW	WSW	1.6	2.1	1.4	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
W	WNW	1.6	2.1	1.4	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
NW	NNW	1.6	2.1	1.4	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
WIND	DIR.	1.6	2.1	1.4	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
CALM		1.6	2.1	1.4	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
TOT		14.0	31.6	33.2	27.3	7.3	1.6	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
												100.0	5.4		
												100.0	5.4		

		JULY										TOTAL NUMBER OF OBSERVATIONS		1963	
		Speed in Knots		17-21		22-27		28-31		31-40						41-47		48-55		Total
Dir.		0-3	4-6	7-10	11-16	17-21	22-27	28-31	31-40	41-47	48-55	Total		Mean Speed	
N	NE	1.0	1.5	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
E	ESE	1.0	1.5	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
S	SSE	1.0	1.5	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
SE	ENE	1.0	1.5	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
SW	WSW	1.0	1.5	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
W	WNW	1.0	1.5	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
NW	NNW	1.0	1.5	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
WIND	DIR.	1.0	1.5	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
CALM		1.0	1.5	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
TOT		14.0	30.8	32.1	21.8	6.5	1.8	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
												100.0	4.9		
												100.0	4.9		

SEYMOUR-JOHNSON AFB, GOLDSBORO, NORTH CAROLINA

WIND ROSES

SEPTEMBER

Dir.	Speed in Knts										Total	Mean Speed		
	0-3	4-6	7-11	12-15	16-20	21-25	26-30	31-35	36-40	41-47			48-55	
N	1.9	3.5	7.1	11.0	12.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	6.3
NNE	1.3	3.0	3.0	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	7.0
NE	1.5	1.7	1.3	1.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0
ENE	1.4	2.2	1.6	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.2
E	1.7	1.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4.9
ESE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.2
SE	1.1	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
SSE	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
S	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
SSW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
SW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
WSW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
W	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
WSW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
W	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
WNW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
NW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
WNW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
NW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
VARBL	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
CALM	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.3
TOT	46.9	26.6	22.4	7.3	5.2	4.0	3.0	2.0	1.0	1.0	1.0	1.0	1.0	100.0
TOTAL NUMBER OF OBSERVATIONS													966	

NOVEMBER

Dir.	Speed in Knts										Total	Mean Speed		
	0-3	4-6	7-11	12-15	16-20	21-25	26-30	31-35	36-40	41-47			48-55	
N	1.4	3.1	3.0	2.9	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	7.3
NNE	1.0	2.4	2.7	2.6	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
NE	1.7	1.8	1.8	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
ENE	1.5	1.3	1.6	1.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
E	1.2	1.6	1.8	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
ESE	1.7	1.1	1.7	1.3	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
SE	1.6	1.4	1.3	1.3	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
SSE	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
S	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
SSW	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
SW	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
WSW	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
W	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
WSW	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
W	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
WNW	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
NW	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
WNW	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
NW	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
VARBL	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
CALM	1.1	1.3	1.6	1.8	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.3
TOT	38.7	27.2	23.7	8.6	1.4	3.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	100.0
TOTAL NUMBER OF OBSERVATIONS													966	

ANNUAL

Dir.	Speed in Knts										Total	Mean Speed		
	0-3	4-6	7-11	12-15	16-20	21-25	26-30	31-35	36-40	41-47			48-55	
N	1.9	3.5	7.1	11.0	12.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	6.8
NNE	1.3	3.0	3.0	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	7.2
NE	1.5	1.7	1.3	1.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6.7
ENE	1.4	2.2	1.6	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
E	1.7	1.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
ESE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
SE	1.1	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
SSE	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
S	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
SSW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
SW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
WSW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
W	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
WSW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
W	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
WNW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
NW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
WNW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
NW	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
VARBL	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
CALM	1.0	1.0	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.7
TOT	39.6	29.2	24.6	9.5	1.5	4.1	3.0	2.0	1.0	1.0	1.0	1.0	1.0	100.0
TOTAL NUMBER OF OBSERVATIONS													11584	

HOLLOMAN AFB ALAMOGORDO, NEW MEXICO

(Lat. 32°51'N, Long. 106°05'W, Elev. 4070 ft.)

Holloman AFB lies ten miles to the southwest of the city of Alamogordo, New Mexico and the foothills of the Sacramento Mountain. These mountains rise abruptly to an average elevation of 8,000 feet, with one peak 40 miles to the northwest, reaching an elevation of 12,000 feet.

West of the Sacramento Mountains lies the Tularosa Basin, a nearly flat, north-south oriented valley about 100 miles long and 40 miles wide. Flanking the valley to the west are the Organ, San Andres and Oscura Mountains, with some peaks above 8,000 feet. Five miles to the west is the White Sands National Monument, a large area of pure gypsum sand. Narrowing gradually, the valley extends northward about 50 miles; to the south it opens into a vast rolling plain.

The climate is typical of desert regions as the mean annual precipitation is less than seven inches. Blowing dust can occur at any time during the year and is the most frequent cause of low visibilities, generally occurring in the afternoon when wind gusts may reach 25 knots or more. Dust-storms and strong gusty surface winds reach their greatest frequency during March and April. Thunderstorms occur all months of the year and are most frequent in July and August. During the winter, snow, freezing rain and light fog may restrict flying conditions for very short periods. In general, flying conditions are relatively good throughout the year.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from September 1942-February 1946 and May 1946-November 1965; with the exception of cloud cover for which data are not available prior to 1946.

HOLLOMAN AFB ALAMOGORDO, NEW MEXICO

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	54.7	60.4	66.0	76.3	85.3	93.9	93.9	92.9	87.1	76.5	63.4	55.5	75.4
Mean	41.3	46.1	51.8	61.2	70.0	79.1	81.3	80.1	73.8	62.6	48.8	42.0	61.4
Minimum	27.7	31.6	37.4	45.9	54.4	64.0	68.3	67.1	60.2	48.3	33.9	28.2	47.2

Record Temperature Extremes

Maximum	78	80	86	94	103	107	108	104	102	92	81	75
Minimum	-11	0	18	23	31	44	55	56	38	30	12	2
	Period of Record: 1942-1964											

MONTHLY MEANS

Precipitation (Inches)

Precipitation	.46	.35	.31	.17	.30	.63	1.11	.96	1.06	.77	.28	.44	6.83
Snowfall*	1.5	.8	.4	T	.0	.0	T	.0	.0	.0	.4	1.3	4.4

(*Hail was included in Snowfall Period of Record: 19+2-1964
Summary prior to January 1956) Snowfall 19+6-1964

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	WSW	WSW	WSW	SW	NNW	S	NNE	SW	WNW	W	SSW
Velocity	67	49	51	49	57	55	47	43	45	41	42
	Period of Record: 1952-1964										

Maximum and/or Minimum Anemometer Height: 55 feet 04/53; 13 feet 04/55

HOLLOMAN AFB, ALAMOGORDO, NEW MEXICO

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY													FEBRUARY																					
Hours	Number of Observations	Dewlings <200 Ft and/or Visibility <1/2 MI	Dewlings <200 Ft and/or Visibility <3/4 MI	Dewlings <4000 Ft and/or Visibility <6 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Dewlings <200 Ft and/or Visibility <1/2 MI	Dewlings <200 Ft and/or Visibility <3/4 MI	Dewlings <4000 Ft and/or Visibility <6 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	
00-02	2,046	1	2.8	5.3	62.4	1	2.6	0	1.8	4.3	9	0	2	1.2	1.2	1.2	09-02	1,833	1	1.7	3.7	67.0	1	1.9	1.9	9	2.8	2.8	1.7	1.4	1.4			
03-05	2,046	2	3.0	5.8	61.3	2.3	2.3	0	1.6	3.9	6	0	1	1.1	1.1	1.1	09-05	1,844	1	1.7	4.3	66.6	1.7	1.4	1.4	1.4	3.1	3.1	1.4	1.0	1.0			
06-08	2,045	8	4.6	7.0	51.4	2.3	2.3	2.3	2.2	4.6	1.2	6	4	2.2	2.2	2.2	06-08	1,935	5	2.2	4.8	56.6	1.7	2	1.5	1.5	3.4	3.4	1.0	1.1	1.1	2.2		
09-11	2,137	5	4.3	7.4	48.6	0	1.9	0	2.6	4.4	1.1	2	0	1.9	1.9	1.9	09-11	1,947	3	3.1	5.0	53.1	2.1	1.1	1.3	1.3	3.4	3.4	0.9	1	1	1.6	2.6	
12-14	2,139	3	3.7	7.2	44.9	0	2.0	0	1.9	3.8	4	0	0	1.5	1.5	1.5	12-14	1,946	4	3.2	6.2	41.8	1.1	1.8	1.0	1.0	2.8	2.8	1.1	1	1	3.1	3.5	
15-17	2,136	3	3.0	6.3	43.7	0	2.5	0	1.1	3.6	2	0	0	1.4	1.4	1.4	15-17	1,946	4	3.6	6.9	46.9	1.5	1.1	1.1	1.1	2.7	2.7	1.4	1	1	4.3	4.7	
18-20	2,049	1	2.1	5.4	51.0	1	2.6	0	1.1	3.6	5	0	0	1.5	1.5	1.5	18-20	1,908	1	1.8	5.0	56.4	1.1	1.1	1.1	1.1	1.8	1.8	1.2	1	1	3.2	3.5	
21-23	2,046	0	2.4	4.9	58.3	0	2.5	0	1.4	3.9	8	0	0	1.1	1.1	1.1	21-23	1,908	1	1.2	3.5	63.4	1.7	1.0	1.0	1.0	2.7	2.7	1.4	1	1	1.4	1.7	
All Hours	16,704	3	3.1	6.2	52.6	0	2.3	0	1.7	4.0	7	1	0	1.6	1.6	1.6	All Hours	15,267	2	2.3	4.9	56.9	0	1.7	0	1.1	2.8	2.8	5	1	1	0	2.0	2.6

MARCH													APRIL																					
Hours	Number of Observations	Dewlings <200 Ft and/or Visibility <1/2 MI	Dewlings <200 Ft and/or Visibility <3/4 MI	Dewlings <4000 Ft and/or Visibility <6 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Dewlings <200 Ft and/or Visibility <1/2 MI	Dewlings <200 Ft and/or Visibility <3/4 MI	Dewlings <4000 Ft and/or Visibility <6 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	
00-02	1,952	0	2.9	6.3	63.6	0	1.9	0	1.5	2.4	1	0	0	1.6	1.7	1.7	00-02	1,888	1	1.1	2.5	69.8	1.3	0.8	0.8	0	0	0	0	0	0	0	2.3	2.4
03-05	1,953	0	3.2	61.3	1.3	1.3	1.3	0	1.0	2.2	2	0	1	1.2	1.2	1.2	03-05	1,890	1	0.8	1.8	69.6	1.1	1.2	1.2	1.2	1.2	1.1	1.3	1.0	1.0	1.4		
06-08	2,041	2	1.8	4.1	52.0	1.6	1.6	1.6	1.0	2.6	6	3	0	1.1	1.1	1.1	06-08	1,974	1	1.3	1.9	59.4	1.1	1.2	1.2	1.2	1.2	1.1	1.6	1.0	1.0	1.4		
09-11	2,040	4	2.6	6.5	50.4	0	1.9	0	1.1	0	2.9	6	0	1.1	1.1	1.1	09-11	1,978	1	1.1	3.1	57.0	1.1	1.2	1.2	1.1	1.1	1.2	1.1	1.2	1.1	1.2	2.5	
12-14	2,043	5	4.1	9.4	44.1	2	2.0	0	1.6	2.6	2	2	0	1.1	1.1	1.1	12-14	1,977	1	2.7	6.9	51.4	1.4	1.3	1.3	1.1	1.1	1.3	1.2	1.2	6.2	6.4		
15-17	2,039	1.1	6.4	11.8	42.3	1	2.2	0	1.2	2.3	0	0	0	10.3	10.4	10.4	15-17	1,979	6	5.1	8.9	45.6	1.6	1.3	1.3	1.1	1.3	1.3	1.1	1.1	8.9	8.9		
18-20	2,043	5	4.0	8.1	51.4	0	1.5	0	1.4	1.9	1	0	0	6.8	6.9	6.9	18-20	1,980	3	3.6	6.9	53.3	1.2	1.2	1.2	1.1	1.2	1.2	1.1	1.1	6.8	6.8		
21-23	2,039	0	1.7	4.6	59.7	0	1.5	0	1.4	1.9	0	0	0	3.6	3.7	3.7	21-23	1,978	2	1.7	4.3	65.9	1.2	1.2	1.2	1.1	1.2	1.2	1.1	1.1	4.6	4.6		
All Hours	16,130	4	2.8	6.3	53.1	0	1.7	0	1.7	2.3	2	0	0	4.5	4.8	4.8	All Hours	15,644	2	2.1	4.6	59.0	1.1	1.1	1.1	1.0	1.1	1.1	1.0	1.1	1.0	1.1	4.3	

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

HOLLOMAN AFB, ALAMOGORDO, NEW MEXICO

Percentage Frequencies of Occurrence
of Specified Weather Conditions

MAY														JUNE																
Hours	Number of observations	Observations above 1000 ft and/or Visibility < 3 M	Observations above 1000 ft and/or Visibility < 3 M	Thunder (Micro precipitation)	Rain and/or drizzle	Frequent rain and/or frequent drizzle	Snow and/or sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or haze	Blowing snow	Dust (blowing and/or suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of observations	Observations above 1000 ft and/or Visibility < 3 M	Observations above 1000 ft and/or Visibility < 3 M	Thunder (Micro precipitation)	Rain and/or drizzle	Frequent rain and/or frequent drizzle	Snow and/or sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or haze	Blowing snow	Dust (blowing and/or suspended)	Total Occurrences of Obstructions to Vision	
01-01	1,990	1	4	72.4	4	9			9					5	5	1,890	2	1.4	73.6	8	1.8				1.8				1.4	1.4
01-05	1,993			71.4	4	4			4					3	3	23-25	1,888	1	2	69.9	5	1.3			1.3				5	7
05-05	2,071	1	5	62.7		5			5					5	5	26-26	2,033	1	3	6	69.2	0	1.5			1.5			1	4
05-11	2,087	1	8	62.5	1	6			6					8	8	29-31	2,049	2	6	71.1	2	0			6			1	4	6
05-14	2,088	2	1.1	2.3	53.3	7	1.1	1	1.1	1	1		2.3	2.4	25-25	2,049	1	1	59.2	1.3	1.0			1.0		0		7	7	
05-17	2,078	3	2.3	4.2	46.1	1.8	1.6	0	1.6				4.4	4.4	30-31	2,047	1	7	2.3	45.3	3.5	2.1		2.4			2.2	2.2	2.2	
05-21	2,015	2	1.8	3.1	51.4	2.0	1.5		1.5				3.1	3.1	35-35	1,890	2	1	6	46.5	4.6	3.1		3.9			2.7	2.7	2.7	
05-23	2,016		3	1.1	65.7	5	1.1		1.1				1.1	1.1	35-35	1,889	1	6	2.1	65.2	2.5	3.1		3.3			2.0	2.0	2.0	
All Hours	16,958	1	6	1.6	60.6	7	1.0	0	1.0	0	0		1.6	1.6	All Hours	15,715	1	4	1.4	62.7	1.7	1.5		1.8	0	1	1	1.3	1.4	

JULY														AUGUST																
Hours	Number of observations	Observations above 1000 ft and/or Visibility < 3 M	Observations above 1000 ft and/or Visibility < 3 M	Thunder (Micro precipitation)	Rain and/or drizzle	Frequent rain and/or frequent drizzle	Snow and/or sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or haze	Blowing snow	Dust (blowing and/or suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of observations	Observations above 1000 ft and/or Visibility < 3 M	Observations above 1000 ft and/or Visibility < 3 M	Thunder (Micro precipitation)	Rain and/or drizzle	Frequent rain and/or frequent drizzle	Snow and/or sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or haze	Blowing snow	Dust (blowing and/or suspended)	Total Occurrences of Obstructions to Vision	
01-02	1,993	1	1.2	49.8	2.7	5.3			5.3					5	5	1,992	1	5	57.6	2.3	4.5			4.5				3	3	
01-05	1,991	1	4	49.8	1.8	3.9			3.9					2	2	19-21	1,994	1	5	56.5	1.1	3.2			3.2	1	1	3	4	
01-08	2,057	4	49.3	5	2.5	2.5			2.5	0	0			0	0	26-28	2,059	1	3	52.4	1	1.8			1.8			1	1	
01-11	2,109	1	9	56.3	2	1.7			1.7					1	1	29-31	2,114	1	4	59.0	1	1.1			1.1					
01-14	2,109	1	1.2	34.0	3.6	3.2			3.2				3	4	32-32	2,111		2	38.8	2.7	3.0			3.0	0					
01-17	2,088	4	1.4	19.9	6.1	5.7			5.7				9	10	35-35	2,088	2	7	23.6	5.3	4.2			4.2	0			6	6	
01-21	1,998	5	1.5	23.5	6.0	6.4			6.4	1	1		1.5	1.6	35-35	1,994	1	2	5	31.3	6.0	6.1		6.1				2	2	
01-23	1,990	3	1.5	41.2	4.0	6.7			6.7				1.1	1.1	2-3-3	1,992	1	7	46.5	3.8	5.7			5.7				4	4	
All Hours	16,469	2	1.1	40.4	3.0	4.4			4.4	0	1		6	7	All Hours	16,104	0	1	5	46.1	2.7	3.7		3.7	0	0	0	2	3	

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

--- indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

HOLLOMAN AFB, ALAMOGORDO, NEW MEXICO

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER															OCTOBER															NOVEMBER															DECEMBER															ANNUAL														
Hours	Number of Observations	Dewltms <200 Fz and/or	Dewltms <200 Fz and/or	Dewltms <300 Fz and/or	Clouds <1000 Fz and/or	Clouds <1000 Fz and/or	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision Suspended	Hours	Number of Observations	Dewltms <200 Fz and/or	Dewltms <200 Fz and/or	Dewltms <300 Fz and/or	Clouds <1000 Fz and/or	Clouds <1000 Fz and/or	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision Suspended																																							
00-00	1,979	5	1.7	72.4	1.5	3.8						3.8							00-00	2,037	5	1.2	75.6	.8	2.6							2.6	.0	.0																																								
01-05	1,979	5	2.5	73.1	9	3.7						3.7	.1	.3					01-05	2,075	7	1.8	76.0	.7	3.0							3.0	.3	.1																																								
06-08	2,091	2	7	2.2	56.6							2.6	.8	.8					06-08	2,188	2	7	2.6	65.8		2.7						2.7	.7	.7																																								
09-11	2,148	7	2.4	67.9	3	2.4						2.4	.6	.4					09-11	2,222	6	2.1	64.8	.2	2.3							2.3	.1	.2																																								
12-14	2,160	8	2.6	61.8								2.6	.3	.1					12-14	2,222	9	2.4	61.2	.2	1.7							1.7	.0	.0																																								
15-17	2,112	8	1.8	94.9	2.0	3.3						3.3	.2	.1					15-17	2,190	7	1.9	61.3	.6	2.4						2.4	.0	.0																																									
18-20	1,980	1	1	9	63.5	2.5	3.6					3.6	.0	.2					18-20	2,046	3	1.0	75.6	.6	2.2						2.2	.2	.2																																									
21-23	1,978	6	1.6	71.0	9	2.9						2.9	.0	.1					21-23	2,039	6	1.6	71.0	.9	2.2						2.2	.2	.2																																									
All	16,407	6	6	2.0	66.0	1.1	3.1					3.1	.2	.2					All	17,007	6	6	1.8	68.4	.5	2.4						2.4	.2	.2																																								
Hours	16,407																		Hours	17,007																																																						
00-00	2,068	8	1.9	73.5	0	7						7	.1	.2					00-00	2,046	6	1.7	4.0	66.9	.1	2.9					2.9	.0	.0																																									
01-05	2,069	9	2.4	72.7								9	.3	.3					01-05	2,046	11	2.4	5.2	67.8	.2	2.8					2.8	.0	.0																																									
06-08	2,130	3	1.4	2.8	63.1	1.1	1.8					1.8	.5	.6					06-08	2,108	3	1.3	5.2	58.3	.1	1.9					1.9	.8	.8																																									
09-11	2,159	1	1.1	3.7	61.9							1.1	.4	.3					09-11	2,137	7	3.1	5.5	54.5		1.9						1.9	.7	.7																																								
12-14	2,160	2	1.7	3.7	60.1							1.7	.1	.2					12-14	2,136	4	2.6	5.4	58.5		1.7						1.7	.7	.7																																								
15-17	2,160	1	1.4	2.9	60.8							1.4	.0	.2					15-17	2,136	2	1.7	4.2	58.5		1.4						1.4	.7	.7																																								
18-20	2,070	8	2.0	67.1	1	1.9						1.9	.2	.0					18-20	2,046	5	2.0	3.7	60.7	.0	1.4					1.4	.7	.7																																									
21-23	2,068	8	2.2	70.5	0	1.4						1.4	.2	.0					21-23	2,045	3	1.5	4.0	59.4		2.1					2.1	.3	.3																																									
All	16,894	1	1.1	2.7	66.1	0	1.5					1.5	.3	.2					All	16,702	6	2.3	4.6	59.6	.0	2.0					2.0	.9	.9																																									
Hours	16,894																		Hours	16,702																																																						

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

... indicates that the condition has occurred exactly 0.00 percent of the time. A blank indicates that the data are not available.

HOLLOMAN AFB, ALAMOGORDO, NEW MEXICO

WIND ROSES

JANUARY

Dir.	Speed in Knots					Total	Mean Speed	Dir.	Speed in Knots					Total	Mean Speed
	1-6	7-12	13-18	19-24	25-33				34-40	41-47	48-55	56			
N	1.3	2.5	2.3	1.0	.2	7.3	1.1	N	1.1	2.5	2.1	.8	.2	6.8	1.2
NNE	1.4	1.8	4.1	4.1	.0	14.4	1.6	NNE	1.1	1.6	1.6	1.1	1.1	5.5	1.4
NW	1.1	1.4	.2	.0	.0	2.7	1.2	NW	1.3	1.8	.4	.1	.0	3.6	1.2
ESE	1.2	1.3	.5	.1	.0	3.1	1.1	ESE	1.9	1.4	.5	.1	.0	3.9	1.5
SE	2.0	3.0	2.4	1.6	.1	11.1	2.2	SE	1.6	3.1	2.8	1.6	.1	9.2	2.3
SSE	1.8	3.0	2.7	1.9	.2	10.6	2.1	SSE	1.6	3.0	2.5	1.1	.0	8.4	2.3
SW	1.6	.9	.9	.2	.0	4.5	1.1	SW	.9	1.2	1.2	1.1	.0	3.4	1.1
WSW	1.6	.7	.6	.5	.2	4.6	1.1	WSW	.9	1.1	1.0	.9	.3	3.8	1.1
W	1.1	1.4	.9	.4	.2	4.0	1.1	W	.9	1.6	1.4	.6	.2	4.7	1.2
WNW	1.0	2.1	1.7	.9	.1	6.8	1.7	WNW	1.0	2.3	1.7	.9	.2	6.1	1.7
WWSW	1.8	1.6	1.6	1.0	.3	6.3	1.6	WWSW	.6	1.5	1.6	1.1	.3	5.1	1.1
CALM	23.6					23.6		CALM	20.1					20.1	
TOT	41.5	28.5	19.5	8.0	1.9	130.0	5.0	TOT	35.8	29.4	21.6	9.6	2.4	130.0	5.7

TOTAL NUMBER OF OBSERVATIONS 1560

FEBRUARY

Dir.	Speed in Knots					Total	Mean Speed	Dir.	Speed in Knots					Total	Mean Speed
	1-6	7-12	13-18	19-24	25-33				34-40	41-47	48-55	56			
N	1.3	2.5	2.3	1.0	.2	7.3	1.1	N	1.1	2.5	2.1	.8	.2	6.8	1.2
NNE	1.4	1.8	4.1	4.1	.0	14.4	1.6	NNE	1.1	1.6	1.6	1.1	1.1	5.5	1.4
NW	1.1	1.4	.2	.0	.0	2.7	1.2	NW	1.3	1.8	.4	.1	.0	3.6	1.2
ESE	1.2	1.3	.5	.1	.0	3.1	1.1	ESE	1.9	1.4	.5	.1	.0	3.9	1.5
SE	2.0	3.0	2.4	1.6	.1	11.1	2.2	SE	1.6	3.1	2.8	1.6	.1	9.2	2.3
SSE	1.8	3.0	2.7	1.9	.2	10.6	2.1	SSE	1.6	3.0	2.5	1.1	.0	8.4	2.3
SW	1.6	.9	.9	.2	.0	4.5	1.1	SW	.9	1.2	1.2	1.1	.0	3.4	1.1
WSW	1.6	.7	.6	.5	.2	4.6	1.1	WSW	.9	1.1	1.0	.9	.3	3.8	1.1
W	1.1	1.4	.9	.4	.2	4.0	1.1	W	.9	1.6	1.4	.6	.2	4.7	1.2
WNW	1.0	2.1	1.7	.9	.1	6.8	1.7	WNW	1.0	2.3	1.7	.9	.2	6.1	1.7
WWSW	1.8	1.6	1.6	1.0	.3	6.3	1.6	WWSW	.6	1.5	1.6	1.1	.3	5.1	1.1
CALM	23.6					23.6		CALM	20.1					20.1	
TOT	41.5	28.5	19.5	8.0	1.9	130.0	5.0	TOT	35.8	29.4	21.6	9.6	2.4	130.0	5.7

TOTAL NUMBER OF OBSERVATIONS 1560

MARCH

Dir.	Speed in Knots					Total	Mean Speed	Dir.	Speed in Knots					Total	Mean Speed
	1-6	7-12	13-18	19-24	25-33				34-40	41-47	48-55	56			
N	1.1	2.0	1.9	1.0	.2	6.4	1.6	N	.9	2.0	1.5	.7	.2	5.3	1.1
NNE	1.7	1.2	7.1	3.0	.0	13.0	2.7	NNE	.5	1.9	1.2	1.1	.0	4.7	1.5
NW	1.7	1.0	.3	.1	.0	3.1	1.0	NW	.7	1.9	.2	.1	.0	2.9	1.0
ESE	1.0	1.2	.4	.0	.0	2.6	1.1	ESE	.9	1.3	.3	.0	.0	2.5	1.1
SE	1.4	3.2	2.4	1.5	.1	8.6	2.1	SE	1.5	3.1	2.2	.7	.1	7.6	2.1
SSE	1.3	3.3	2.8	1.0	.2	10.6	2.1	SSE	1.2	2.9	2.9	1.5	.3	8.8	2.1
SW	1.7	1.6	2.0	1.3	.3	6.9	1.7	SW	.8	2.0	3.1	2.4	.8	7.1	1.8
WSW	1.7	1.7	2.5	1.9	.7	10.5	2.0	WSW	.8	2.0	3.1	2.4	.8	7.1	1.8
W	1.6	1.5	1.8	1.2	.5	6.4	1.6	W	.9	1.9	1.8	1.1	.5	6.1	1.6
WNW	1.5	1.8	1.8	.8	.2	6.9	1.7	WNW	.5	1.0	1.8	.4	.1	4.6	1.1
WWSW	1.6	1.3	1.0	.9	.2	5.0	1.4	WWSW	.6	1.2	1.2	.6	.2	3.9	1.1
CALM	16.6					16.6		CALM	14.2					14.2	
TOT	30.4	27.4	23.6	12.6	3.8	130.0	6.6	TOT	27.4	27.7	25.1	13.6	4.1	130.0	6.9

TOTAL NUMBER OF OBSERVATIONS 1560

APRIL

Dir.	Speed in Knots					Total	Mean Speed	Dir.	Speed in Knots					Total	Mean Speed
	1-6	7-12	13-18	19-24	25-33				34-40	41-47	48-55	56			
N	1.1	2.0	1.9	1.0	.2	6.4	1.6	N	.9	2.0	1.5	.7	.2	5.3	1.1
NNE	1.7	1.2	7.1	3.0	.0	13.0	2.7	NNE	.5	1.9	1.2	1.1	.0	4.7	1.5
NW	1.7	1.0	.3	.1	.0	3.1	1.0	NW	.7	1.9	.2	.1	.0	2.9	1.0
ESE	1.0	1.2	.4	.0	.0	2.6	1.1	ESE	.9	1.3	.3	.0	.0	2.5	1.1
SE	1.4	3.2	2.4	1.5	.1	8.6	2.1	SE	1.5	3.1	2.2	.7	.1	7.6	2.1
SSE	1.3	3.3	2.8	1.0	.2	10.6	2.1	SSE	1.2	2.9	2.9	1.5	.3	8.8	2.1
SW	1.7	1.6	2.0	1.3	.3	6.9	1.7	SW	.8	2.0	3.1	2.4	.8	7.1	1.8
WSW	1.7	1.7	2.5	1.9	.7	10.5	2.0	WSW	.8	2.0	3.1	2.4	.8	7.1	1.8
W	1.6	1.5	1.8	1.2	.5	6.4	1.6	W	.9	1.9	1.8	1.1	.5	6.1	1.6
WNW	1.5	1.8	1.8	.8	.2	6.9	1.7	WNW	.5	1.0	1.8	.4	.1	4.6	1.1
WWSW	1.6	1.3	1.0	.9	.2	5.0	1.4	WWSW	.6	1.2	1.2	.6	.2	3.9	1.1
CALM	16.6					16.6		CALM	14.2					14.2	
TOT	30.4	27.4	23.6	12.6	3.8	130.0	6.6	TOT	27.4	27.7	25.1	13.6	4.1	130.0	6.9

TOTAL NUMBER OF OBSERVATIONS 1560

HOLLOMAN AFB, ALAMOGORDO, NEW MEXICO WIND ROSES

Dir.	MAY										Total	Mean Wind Speed			
	Speed in Knots														
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			56		
N	.7	1.2	1.0	.4	1.0	.4	.0	.0	.0	.0	.0	3.2	4.1	3.5	6.4
NE	.4	1.0	.3	1.1	.0	.0	.0	.0	.0	.0	.0	2.3	2.3	2.3	6.2
E	.5	1.1	.2	1.1	.0	.0	.0	.0	.0	.0	.0	1.8	4.0	3.0	6.2
ESE	1.1	1.3	.5	1.2	.0	.0	.0	.0	.0	.0	.0	2.7	2.8	3.0	7.0
SE	1.6	3.8	2.9	1.2	.3	.1	.0	.0	.0	.0	.0	9.9	8.8	8.6	3.8
SSE	1.2	3.9	2.7	2.1	.4	.1	.0	.0	.0	.0	.0	11.3	8.9	10.9	6.5
S	1.8	3.7	2.4	1.8	.3	.1	.0	.0	.0	.0	.0	11.8	7.7	10.9	7.8
SSW	1.0	2.7	2.6	1.7	.3	.1	.0	.0	.0	.0	.0	7.0	5.0	12.5	7.8
SW	1.0	2.4	2.3	1.6	.5	.2	.0	.0	.0	.0	.0	6.9	5.9	8.1	8.5
WSW	.7	2.0	2.0	1.0	.3	.1	.0	.0	.0	.0	.0	6.1	3.3	5.8	8.1
W	.4	1.2	1.3	.7	.1	.0	.0	.0	.0	.0	.0	4.0	1.0	2.7	6.6
WNW	.4	1.2	1.3	.7	.1	.0	.0	.0	.0	.0	.0	4.0	1.0	3.8	6.8
NW	.4	1.0	.7	.3	.1	.1	.0	.0	.0	.0	.0	2.6	7.4	3.0	7.2
VALE												13.9		15.1	
CALM															
TOT	28.8	27.6	26.3	34.7	3.4	1.0	.2	.1	.0	.0	.0	100.0	6.8	100.0	6.4
TOTAL NUMBER OF OBSERVATIONS												15595			

Dir.	JUNE										Total	Mean Wind Speed			
	Speed in Knots														
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			56		
N	.9	1.7	1.7	1.1	1.1	.0	.0	.0	.0	.0	.0	3.7	6.1	3.7	6.4
NE	.6	.9	1.5	1.2	.0	.0	.0	.0	.0	.0	.0	2.3	6.2	2.3	6.2
E	1.6	1.3	1.3	1.2	.0	.0	.0	.0	.0	.0	.0	3.0	7.0	3.0	7.0
ESE	1.8	1.2	.5	1.3	.0	.0	.0	.0	.0	.0	.0	2.6	3.8	2.6	3.8
SE	1.5	2.8	2.9	2.4	.1	.1	.0	.0	.0	.0	.0	10.9	6.5	10.9	6.5
SSE	1.8	3.7	2.4	1.8	.3	.1	.0	.0	.0	.0	.0	11.8	7.7	10.9	7.8
S	.8	2.1	2.8	1.6	.2	.1	.0	.0	.0	.0	.0	6.5	6.1	8.1	8.5
SSW	.8	2.1	2.8	1.6	.2	.1	.0	.0	.0	.0	.0	6.5	6.1	8.1	8.5
SW	1.0	2.2	2.1	1.9	.1	.0	.0	.0	.0	.0	.0	5.8	8.1	5.8	8.1
WSW	.7	1.5	1.1	1.4	.1	.0	.0	.0	.0	.0	.0	2.7	6.6	2.7	6.6
W	.7	1.5	1.1	1.4	.1	.0	.0	.0	.0	.0	.0	3.8	6.8	3.8	6.8
WNW	.7	1.5	1.1	1.4	.1	.0	.0	.0	.0	.0	.0	3.8	6.8	3.8	6.8
NW	.7	1.5	1.1	1.4	.1	.0	.0	.0	.0	.0	.0	3.8	6.8	3.8	6.8
VALE												15.1		15.1	
CALM															
TOT	29.3	28.4	29.7	33.4	2.4	.7	.1	.0	.0	.0	.0	100.0	6.4	100.0	6.4
TOTAL NUMBER OF OBSERVATIONS												17117			

Dir.	JULY										Total	Mean Wind Speed			
	Speed in Knots														
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			56		
N	1.0	1.5	1.2	.4	1.1	1.1	.0	.0	.0	.0	.0	4.3	6.8	4.3	6.8
NE	.6	1.0	1.6	.3	1.1	1.0	.0	.0	.0	.0	.0	3.5	6.8	3.5	6.8
E	.7	.8	1.6	.3	1.1	1.0	.0	.0	.0	.0	.0	2.4	6.9	2.4	6.9
ESE	1.7	1.4	.6	.3	1.0	.0	.0	.0	.0	.0	.0	2.9	6.6	2.9	6.6
SE	1.4	3.4	3.5	1.5	.3	.1	.0	.0	.0	.0	.0	10.1	7.6	10.1	7.6
SSE	1.7	3.3	4.8	1.3	.4	.0	.0	.0	.0	.0	.0	12.5	7.3	12.5	7.3
S	.8	1.7	1.8	.5	1.1	.0	.0	.0	.0	.0	.0	5.0	7.0	5.0	7.0
SSW	.9	1.1	1.0	.2	.0	.0	.0	.0	.0	.0	.0	3.2	6.0	3.2	6.0
SW	1.1	2.0	1.3	.3	.0	.0	.0	.0	.0	.0	.0	4.6	6.1	4.6	6.1
WSW	.9	1.1	1.0	.2	.0	.0	.0	.0	.0	.0	.0	3.2	6.0	3.2	6.0
W	1.2	1.3	1.5	.4	.1	.0	.0	.0	.0	.0	.0	4.8	6.3	4.8	6.3
WNW	1.2	1.3	1.5	.4	.1	.0	.0	.0	.0	.0	.0	4.8	6.3	4.8	6.3
NW	1.2	1.3	1.5	.4	.1	.0	.0	.0	.0	.0	.0	4.8	6.3	4.8	6.3
VALE												17.7		17.7	
CALM															
TOT	32.2	29.5	26.9	9.2	1.6	.5	.1	.0	.0	.0	.0	100.0	5.7	100.0	5.7
TOTAL NUMBER OF OBSERVATIONS												16463			

Dir.	AUGUST										Total	Mean Wind Speed			
	Speed in Knots														
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55			56		
N	1.1	1.8	1.1	.4	1.1	.0	.0	.0	.0	.0	.0	4.6	6.4	4.6	6.4
NE	.8	1.1	1.9	.5	1.1	.0	.0	.0	.0	.0	.0	3.6	6.1	3.6	6.1
E	.7	1.2	.5	.2	.0	.0	.0	.0	.0	.0	.0	2.4	6.6	2.4	6.6
ESE	1.7	1.2	.8	.2	.0	.0	.0	.0	.0	.0	.0	3.1	6.1	3.1	6.1
SE	1.2	3.1	3.1	1.2	.2	.1	.0	.0	.0	.0	.0	10.3	7.1	10.3	7.1
SSE	1.5	4.1	4.2	1.2	.1	.0	.0	.0	.0	.0	.0	11.2	7.2	11.2	7.2
S	.9	1.8	1.4	.4	.0	.0	.0	.0	.0	.0	.0	4.5	6.4	4.5	6.4
SSW	1.6	1.9	1.9	.2	.0	.0	.0	.0	.0	.0	.0	3.2	6.0	3.2	6.0
SW	1.0	1.6	1.5	.2	.1	.0	.0	.0	.0	.0	.0	4.4	6.1	4.4	6.1
WSW	1.0	1.6	1.5	.2	.1	.0	.0	.0	.0	.0	.0	4.4	6.1	4.4	6.1
W	1.0	2.1	1.5	.4	.1	.0	.0	.0	.0	.0	.0	5.1	6.4	5.1	6.4
WNW	1.0	2.1	1.5	.4	.1	.0	.0	.0	.0	.0	.0	5.1	6.4	5.1	6.4
NW	1.0	2.1	1.5	.4	.1	.0	.0	.0	.0	.0	.0	5.1	6.4	5.1	6.4
VALE												21.2		21.2	
CALM															
TOT	32.9	31.0	24.2	7.5	1.1	.3	.1	.0	.0	.0	.0	100.0	5.2	100.0	5.2
TOTAL NUMBER OF OBSERVATIONS												16158			

HOLLOMAN AFB, ALAMOGORDO, NEW MEXICO WIND ROSES

SEPTEMBER

Dir.	Speed in Knots					Total	Freq.	Speed in Knots					Total	Freq.	
	0-3	4-6	7-10	11-16	17-21			22-27	28-33	34-40	41-47	48-55			
N	1.6	1.0	1.3	1.1	1.0	6.0	1.7	5.0	1.6	1.6	5.1	1.1	1.0	5.1	5.5
NE	.9	1.1	1.6	1.2	1.1	6.0	2.8	3.7	1.6	1.6	5.1	1.1	1.0	4.0	4.4
E	1.1	1.5	2.3	1.1	1.0	6.0	3.0	4.8	1.6	1.7	4.4	1.0	1.0	2.9	4.2
ESE	1.7	1.0	1.5	1.1	1.0	6.0	2.3	2.1	1.0	1.2	4.4	1.1	1.0	2.6	4.6
SSE	1.5	1.2	1.4	1.5	1.2	6.0	4.7	7.0	1.6	1.3	2.8	1.0	1.0	8.0	6.0
S	1.8	1.7	3.4	1.4	1.2	6.0	11.0	7.2	2.2	3.4	3.2	1.1	1.0	9.9	6.5
SW	1.2	2.0	1.9	1.6	1.1	6.0	5.7	6.7	1.2	1.5	2.6	1.1	1.0	4.3	6.8
WSW	1.7	1.1	1.2	1.1	1.0	6.0	3.3	6.7	1.7	1.3	3.1	1.1	1.0	2.6	6.9
W	1.6	1.3	1.7	1.2	1.1	6.0	2.7	6.0	1.7	1.1	2.1	1.1	1.0	4.2	6.1
NW	1.1	1.2	1.3	1.3	1.1	6.0	5.1	6.1	1.2	1.9	1.0	1.1	1.0	4.5	5.8
WNW	.9	1.6	1.9	1.3	1.1	6.0	3.7	6.2	1.8	1.3	1.8	1.1	1.0	4.5	6.4
VBREL							22.9							25.8	
CALC	39.2	30.0	26.3	7.3	1.1	2.0	100.0	5.0						100.0	4.4
TOT	TOTAL NUMBER OF OBSERVATIONS												16697		

NOVEMBER

Dir.	Speed in Knots					Total	Freq.	Speed in Knots					Total	Freq.	
	0-3	4-6	7-10	11-16	17-21			22-27	28-33	34-40	41-47	48-55			
N	1.0	1.4	1.6	1.4	1.2	6.0	6.6	6.3	2.0	3.1	2.1	1.1	1.2	1.1	6.7
NE	1.9	2.3	1.5	1.1	1.0	6.0	4.8	4.4	1.6	2.3	1.5	1.1	1.0	4.7	4.3
E	1.7	1.9	2.2	1.1	1.0	6.0	3.0	4.0	1.1	2.0	1.2	1.0	1.0	3.3	4.1
ESE	1.1	1.3	1.5	1.1	1.0	6.0	3.0	4.8	1.2	1.4	1.4	1.0	1.0	3.0	4.3
SSE	1.9	2.0	2.1	1.8	1.1	6.0	7.7	6.1	1.9	3.0	2.2	1.1	1.0	7.9	6.1
S	2.0	3.1	1.9	1.6	1.1	6.0	11.6	5.9	1.8	2.5	1.9	1.1	1.0	6.9	6.1
SW	1.8	1.2	1.0	1.2	1.0	6.0	3.7	4.2	1.8	1.9	1.5	1.1	1.0	3.0	6.4
WSW	1.6	1.9	1.7	1.4	1.1	6.0	4.3	6.7	1.7	1.3	1.3	1.1	1.1	2.5	6.2
W	1.8	1.7	1.3	1.3	1.1	6.0	5.1	7.0	1.4	1.5	1.8	1.1	1.0	3.2	6.0
NW	1.3	2.0	1.6	1.7	1.1	6.0	5.8	7.0	1.4	2.4	1.6	1.2	1.0	3.9	6.4
WNW	1.0	1.7	1.2	1.8	1.1	6.0	5.2	7.8	1.2	1.8	1.5	1.2	1.1	6.4	6.3
VBREL							24.8							24.8	
CALC	45.3	29.0	17.0	6.5	1.5	1.7	100.0	4.7						100.0	4.6
TOT	TOTAL NUMBER OF OBSERVATIONS												16697		

ANNUAL

Dir.	Speed in Knots					Total	Freq.	Speed in Knots					Total	Freq.	
	0-3	4-6	7-10	11-16	17-21			22-27	28-33	34-40	41-47	48-55			
N	1.2	2.1	1.4	1.6	1.1	6.0	6.8	6.8	2.0	3.1	2.1	1.1	1.2	6.7	6.9
NE	1.7	1.2	1.5	1.1	1.0	6.0	4.8	4.4	1.6	2.3	1.5	1.1	1.0	4.7	4.3
E	1.3	1.6	1.4	1.1	1.0	6.0	3.0	4.0	1.1	2.0	1.2	1.0	1.0	3.3	4.1
ESE	1.8	1.6	1.4	1.1	1.0	6.0	3.4	4.7	1.2	1.4	1.4	1.0	1.0	3.0	4.3
SSE	1.6	3.2	2.6	1.9	1.2	6.0	11.6	5.9	1.8	2.5	1.9	1.1	1.0	7.9	6.1
S	1.8	3.0	3.1	1.4	1.2	6.0	14.9	7.5	1.8	2.5	1.9	1.1	1.0	6.9	6.1
SW	1.6	1.5	1.6	1.8	1.2	6.0	4.9	7.5	1.8	1.9	1.5	1.1	1.0	3.0	6.4
WSW	1.7	1.7	1.8	1.3	1.1	6.0	5.0	6.3	1.7	1.3	1.3	1.1	1.1	2.5	6.2
W	1.6	1.4	1.4	1.6	1.2	6.0	5.6	7.4	1.4	1.5	1.8	1.2	1.0	3.2	6.0
NW	1.6	1.1	1.7	1.2	1.1	6.0	5.2	6.6	1.4	2.4	1.6	1.2	1.0	6.4	6.3
WNW	1.7	1.4	1.1	1.8	1.1	6.0	4.0	7.5	1.2	1.8	1.5	1.2	1.1	5.6	7.6
VBREL							26.1							24.8	
CALC	36.3	29.0	22.0	9.5	2.1	1.8	100.0	5.6						100.0	4.6
TOT	TOTAL NUMBER OF OBSERVATIONS												16697		

McGUIRE AFB WRIGHTSTOWN, NEW JERSEY (Lat. 40°00'N, Long. 74°36'W, Elev. 148 ft.)

The areas surrounding McGuire AFB are flat to the south and east and in all directions under 25 miles. The Allegheny Mountains, lying 75 miles to the west and the Atlantic Ocean 30 miles to the east, have a noticeable effect on the weather at this station. From fall through spring, air masses moving across the mountains from the west to east are considerably warmed in the lower levels by down-slope motion, and weather conditions will generally remain good except for brief periods during a frontal passage. The most hazardous weather conditions, heavy snows with low ceilings and visibilities, are associated with low pressure systems moving up the east coast. Throughout the winter months freezing rain or sleet is a very real hazard. With easterly or southeasterly winds, advection-radiation fog forms at night under clear skies and results in several hours of poor visibilities near dawn. Throughout the spring season there are brief periods of shower activity with stronger surface winds, decreased visibilities, and low ceilings.

The prevailing wind is from the southwest during summer. During this season visibility may be reduced by ground fog and haze. At times the haze may extend as high as 12,000 feet.

Thunderstorms have occurred in every month of the year, but the majority of occurrences are associated with prefrontal squall lines forming east of the Allegheny Mountains and may occasionally be accompanied by gusty surface winds. The occurrence of hail is rare, but it is always a threat in any well developed squall line.

McGUIRE AFB (Cont'd.)

Average cloud cover is less during the fall than in any other season. These low cloud amounts also permit free radiation which often brings about the formation of ground fog by sunrise.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from August 1942-March 1946 and August 1948-December 1964; with the exception of cloud cover for which data are not available prior to 1946.

McGUIRE AFB WRIGHTSTOWN, NEW JERSEY

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	40.2	42.1	49.9	61.4	71.9	81.0	84.8	82.5	75.8	66.1	54.1	41.4	62.3
Mean	32.7	34.2	41.1	51.4	61.5	70.8	75.3	73.2	66.4	56.6	45.5	33.9	53.2
Minimum	24.9	26.1	32.1	41.1	50.7	60.3	65.4	63.7	56.7	46.7	36.5	26.1	43.9
Record Temperature Extremes													
Maximum	74	74	87	90	93	97	100	100	100	88	82	71	
Minimum	0	-4	6	19	35	42	50	47	35	26	15	-1	
	Period of Record: 1942-1946, 1948-1964												
MONTHLY MEANS	Precipitation (Inches)												
Precipitation	2.85	2.86	3.99	3.67	2.87	2.92	4.53	4.66	3.42	3.11	3.56	3.66	42.09
Snowfall*	5.1	4.5	5.1	.2	T	.0	T	.0	.0	.1	.8	4.2	19.9
(*Hail was included in Snowfall Period of Record: 1942-1946, 1948-1964 Summary prior to January 1956)													
Surface Winds (Knots) - Record Peak Gusts													
Wind Direction	SW	NW	SSE	E	WNW	W	WNW	SSW	NW	NW	ESE	WNW	
Velocity	49	48	54	50	42	71	43	87	56	42	73	51	
	Period of Record: 1946, 1948-1964												

Maximum and/or Minimum Anemometer Height: 50 feet 06/53; 15 feet 07/61

McGUIRE AFB, WRIGHTSTOWN, NEW JERSEY

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY												FEBRUARY											
Hours	Number of Observations	Occurrences <1/8" and/or Visibility <1.0 MI	Occurrences <1/4" and/or Visibility <1.5 MI	Occurrences <1/2" and/or Visibility <2.0 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision								
00-02	1,360	4.9	23.7	46.0	0.0	10.1	1.2	4.9	0.0	59.9	18.9	19.7	1.5	1.1	35.1								
02-04	1,861	5.8	24.7	46.1	0.0	11.4	1.2	5.5	0.1	74.3	16.5	20.3	1.1	37.4									
04-06	1,866	5.6	27.7	55.2	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
06-08	1,766	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
08-10	1,859	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
10-12	1,861	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
12-14	1,866	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
14-16	1,866	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
16-18	1,866	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
18-20	1,866	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
20-22	1,866	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
22-24	1,866	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
24-26	1,866	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
26-28	1,866	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
28-30	1,866	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
30-31	1,866	5.6	25.7	57.1	0.0	12.5	1.1	5.6	0.0	75.3	13.5	27.5	1.1	55.0									
ALL	54,073	5.9	23.6	52.7	0.0	12.5	1.1	5.6	0.1	74.3	16.5	20.3	1.1	37.4									

MARCH												APRIL											
Hours	Number of Observations	Occurrences <1/8" and/or Visibility <1.0 MI	Occurrences <1/4" and/or Visibility <1.5 MI	Occurrences <1/2" and/or Visibility <2.0 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision								
00-02	1,859	5.7	25.3	47.9	0.0	12.5	1.1	5.7	0.0	74.7	17.5	12.7	1.3	0.0	28.9								
02-04	1,860	5.5	25.4	45.7	0.0	11.5	1.1	4.2	0.0	75.7	20.3	15.5	1.0	34.2									
04-06	1,866	5.3	27.1	44.0	0.0	12.5	1.1	4.5	0.0	75.9	20.9	23.5	1.1	44.5									
06-08	1,866	5.1	22.7	44.5	0.0	12.4	1.1	4.6	0.0	77.1	17.3	16.9	1.0	33.4									
08-10	1,866	5.0	20.2	37.1	0.0	12.5	1.1	5.9	0.0	74.9	14.1	12.3	1.0	34.2									
10-12	1,857	5.2	23.0	35.7	0.0	12.5	1.1	5.1	0.0	75.3	12.7	12.1	1.0	28.3									
12-14	1,857	5.5	17.7	34.5	0.0	12.0	1.1	5.6	0.0	75.1	14.2	12.1	1.0	25.5									
14-16	1,859	5.0	17.0	34.0	0.0	12.4	1.1	5.4	0.0	75.4	15.3	11.1	1.0	26.1									
16-18	1,859	5.0	20.2	36.4	0.0	12.0	1.1	5.9	0.0	75.0	17.1	14.3	1.0	30.2									
18-20	1,859	5.0	20.2	36.4	0.0	12.0	1.1	5.9	0.0	75.0	17.1	14.3	1.0	30.2									
20-22	1,859	5.0	20.2	36.4	0.0	12.0	1.1	5.9	0.0	75.0	17.1	14.3	1.0	30.2									
22-24	1,859	5.0	20.2	36.4	0.0	12.0	1.1	5.9	0.0	75.0	17.1	14.3	1.0	30.2									
24-26	1,859	5.0	20.2	36.4	0.0	12.0	1.1	5.9	0.0	75.0	17.1	14.3	1.0	30.2									
26-28	1,859	5.0	20.2	36.4	0.0	12.0	1.1	5.9	0.0	75.0	17.1	14.3	1.0	30.2									
28-30	1,859	5.0	20.2	36.4	0.0	12.0	1.1	5.9	0.0	75.0	17.1	14.3	1.0	30.2									
30-31	1,859	5.0	20.2	36.4	0.0	12.0	1.1	5.9	0.0	75.0	17.1	14.3	1.0	30.2									
ALL	54,073	5.5	23.6	44.5	0.0	12.4	1.1	5.4	0.0	74.7	17.5	12.7	1.3	0.0									

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

--- indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

MCGUIRE AFB, WRIGHTSTOWN, NEW JERSEY

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY												
Hours	Number of Observations	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Cloud Cover %/10	Thunder (Light or Mishot) Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog
Hours	Number of Observations	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Cloud Cover %/10	Thunder (Light or Mishot) Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog
00-02	1,767	5.9	21.2	34.6	43.8	1.0	11.5	...	...	...	11.5	23.2
03-05	1,766	7.5	29.3	46.3	37.1	.5	11.6	...	...	...	11.6	31.3
06-08	1,766	4.8	26.6	47.1	31.0	.3	11.2	...	...	...	11.2	28.3
09-11	1,767	4.2	20.4	37.0	26.6	.2	10.5	...	...	...	10.5	11.6
12-14	1,769	1.1	14.2	31.1	23.7	.3	9.0	...	...	...	9.0	7.3
15-17	1,765	.3	10.9	26.4	25.3	1.2	9.4	...	...	...	9.4	5.9
18-20	1,766	1.0	13.0	29.7	29.8	1.5	10.5	...	...	...	10.5	9.3
21-23	1,766	2.3	17.7	28.8	41.6	1.6	10.7	...	...	...	10.7	14.7
All Hours 14,108	2.8	19.4	34.5	38.4	.9	10.5	...	...	...	10.5	16.8	13.3
Total Occurrences of Dust (Blowing and/or Suspended)	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Blowing Snow	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Smoke and/or Haze	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Fog	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Precipitation	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Blowing and/or Suspended	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Dust (Blowing and/or Suspended)	...	...	...	...	...	...	...	...	...	...	...	...

JULY												
Hours	Number of Observations	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Cloud Cover %/10	Thunder (Light or Mishot) Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog
Hours	Number of Observations	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Cloud Cover %/10	Thunder (Light or Mishot) Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog
00-02	1,765	3.4	21.5	43.8	47.7	.9	7.5	...	...	...	7.5	25.7
03-05	1,766	6.1	32.6	60.0	36.8	.3	7.0	...	...	...	7.0	10.7
06-08	1,766	3.9	33.0	59.5	31.6	.4	6.2	...	...	...	6.2	11.9
09-11	1,767	1.1	19.1	43.1	27.9	.6	6.3	...	...	...	6.3	7.6
12-14	1,766	...	10.7	34.9	17.6	1.7	6.7	...	...	...	6.7	2.8
15-17	1,765	.2	9.0	27.7	20.7	3.2	8.0	...	...	...	8.0	3.2
18-20	1,766	.4	10.6	26.1	31.5	3.2	7.9	...	...	...	7.9	6.7
21-23	1,766	1.2	13.2	31.9	46.8	2.0	6.3	...	...	...	6.3	13.5
All Hours 14,123	1.9	18.7	40.9	38.6	1.5	7.0	...	...	...	7.0	16.5	16.5
Total Occurrences of Dust (Blowing and/or Suspended)	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Blowing Snow	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Smoke and/or Haze	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Fog	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Precipitation	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Blowing and/or Suspended	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Dust (Blowing and/or Suspended)	...	...	...	...	...	...	...	...	...	...	...	...

AUGUST												
Hours	Number of Observations	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Cloud Cover %/10	Thunder (Light or Mishot) Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog
Hours	Number of Observations	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Visibility < 2000 Ft and/or Visibility < 3 MI	Cloud Cover %/10	Thunder (Light or Mishot) Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog
00-02	1,762	4.7	24.8	47.9	40.9	1.3	6.9	...	...	...	6.9	34.1
03-05	1,762	7.3	33.9	61.1	41.6	.8	8.0	...	...	...	8.0	14.8
06-08	1,763	4.3	39.8	66.0	34.1	.4	8.2	...	...	...	8.2	19.8
09-11	1,763	1.1	20.3	59.1	35.6	.6	8.0	...	...	...	8.0	9.5
12-14	1,763	1.1	11.0	42.2	21.6	1.1	7.2	...	...	...	7.2	4.4
15-17	1,762	...	9.5	35.5	26.3	2.5	8.5	...	...	...	8.5	4.3
18-20	1,769	.3	10.3	30.1	39.1	1.9	6.8	...	...	...	6.8	6.4
21-23	1,762	1.1	13.5	37.7	50.8	1.3	6.2	...	...	...	6.2	15.9
All Hours 14,174	2.2	20.6	44.1	36.8	1.2	7.4	...	...	...	7.4	19.5	19.5
Total Occurrences of Dust (Blowing and/or Suspended)	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Blowing Snow	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Smoke and/or Haze	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Fog	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Precipitation	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Blowing and/or Suspended	...	...	...	...	...	...	...	...	...	...	...	...
Total Occurrences of Dust (Blowing and/or Suspended)	...	...	...	...	...	...	...	...	...	...	...	...

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
... indicates that the condition has occurred exactly 0.00 percent of the time.
A blank indicates that the data are not available.

McGUIRE AFB, WRIGHTSTOWN, NEW JERSEY

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER																
Hours	Number of Observations	Visibility <200 Ft and/or Visibility <1/2 MI	Visibility <200 Ft and/or Visibility <3 MI	Visibility <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,889	4.0	21.4	15.4	51.0	3	7.6	...	...	...	7.6	25.1	18.8	...	...	4.3
03-05	1,892	6.2	30.3	36.4	45.6	2	9.4	...	...	...	9.4	35.6	21.0	...	...	53.8
06-08	1,889	5.3	36.4	62.3	38.9	2	10.5	...	...	...	10.5	41.1	30.1	...	1	60.1
09-11	1,890	3	23.0	45.0	35.5	...	8.7	...	...	...	8.7	13.1	25.9	...	...	37.0
12-14	1,890	1	14.6	38.2	23.5	3	7.6	...	...	...	7.6	7.2	18.9	...	...	24.4
15-17	1,889	2	12.3	29.6	31.1	7	8.1	...	...	...	8.1	7.2	15.4	...	...	24.7
18-20	1,890	3	13.0	30.4	44.2	5	8.3	...	...	...	8.3	10.6	19.5	...	...	27.6
21-23	1,890	6	15.0	34.6	51.5	7	7.7	...	...	...	7.7	15.7	20.5	...	...	33.9
All Hours 15,117	2.8	24.0	43.0	41.1	4	8.1	...	...	...	...	8.1	19.5	21.1	...	1	37.5

OCTOBER																
Hours	Number of Observations	Visibility <200 Ft and/or Visibility <1/2 MI	Visibility <200 Ft and/or Visibility <3 MI	Visibility <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,993	4.2	19.6	43.6	54.4	...	9.1	...	...	...	9.1	24.1	18.6	...	...	39.3
03-05	1,993	6.0	24.6	50.5	53.5	1	7.6	...	...	...	7.6	31.8	20.0	...	...	47.0
06-08	1,993	6.3	37.7	61.6	36.9	3	9.6	...	...	...	9.6	41.2	32.2	...	...	60.0
09-11	1,993	8	22.4	49.4	39.9	1	8.6	...	...	...	8.6	15.1	27.3	...	...	39.1
12-14	1,993	...	13.6	30.8	37.4	4	9.0	...	...	...	9.0	7.3	16.3	...	...	23.1
15-17	1,993	2	11.9	30.3	35.7	2	9.6	...	...	...	9.6	7.6	15.2	...	...	22.7
18-20	1,993	3	12.7	30.2	49.9	3	8.5	...	...	...	8.5	10.9	18.9	...	...	28.6
21-23	1,993	2.2	14.6	34.3	53.1	2	5.7	...	...	...	5.7	15.3	18.0	...	...	31.4
All Hours 15,684	2.5	19.7	41.5	42.1	2	8.9	...	...	...	...	8.9	19.4	20.8	...	...	36.4

NOVEMBER																
Hours	Number of Observations	Visibility <200 Ft and/or Visibility <1/2 MI	Visibility <200 Ft and/or Visibility <3 MI	Visibility <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,992	3.7	19.2	44.0	45.5	...	10.5	...	...	...	10.5	19.8	18.1	...	...	35.1
03-05	1,992	4.5	21.0	41.9	44.6	...	9.3	...	...	...	9.3	21.1	20.3	...	...	38.3
06-08	1,993	4.6	27.9	51.6	35.5	...	9.1	...	...	...	9.1	24.9	29.2	...	...	48.1
09-11	1,993	3.6	25.8	48.9	34.5	...	9.8	...	...	...	9.8	15.9	32.4	...	...	47.2
12-14	1,992	2.3	20.4	42.6	31.1	1	10.2	...	...	...	10.2	13.7	28.2	...	...	37.7
15-17	1,992	3.1	20.6	40.4	35.8	...	9.5	...	...	...	9.5	14.0	23.0	...	...	36.8
18-20	1,993	3.1	19.6	37.5	45.0	...	11.3	...	...	...	11.3	15.0	20.7	...	...	34.7
21-23	1,993	3.0	19.2	38.1	45.7	1	11.6	...	...	...	11.6	16.4	18.1	...	...	33.3
All Hours 15,618	3.5	21.8	45.0	38.9	0	10.1	...	...	...	...	10.1	17.7	23.2	...	...	38.8

ANNUAL																
Hours	Number of Observations	Visibility <200 Ft and/or Visibility <1/2 MI	Visibility <200 Ft and/or Visibility <3 MI	Visibility <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
All Hours 175,757	2.6	20.3	40.0	37.4	5	9.7	...	...	...	...	9.7	17.7	20.6	...	...	35.6

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

MCGUIRE AFB, WRIGHTSTOWN, NEW JERSEY WIND ROSES

JANUARY

Dir.	Speed in Knts					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	.6	1.9	2.3	.7	1.1	5.9	1.7
NNE	.6	1.8	1.7	1.3	1.1	6.3	1.8
NE	.6	1.8	1.1	1.7	2.2	3.5	2.1
NNE	.6	1.8	1.1	1.7	2.2	3.5	2.1
E	.6	1.8	1.1	1.7	2.2	3.5	2.1
ESE	.6	1.8	1.1	1.7	2.2	3.5	2.1
SE	.6	1.8	1.1	1.7	2.2	3.5	2.1
SSE	.6	1.8	1.1	1.7	2.2	3.5	2.1
S	.6	1.8	1.1	1.7	2.2	3.5	2.1
SSW	.6	1.8	1.1	1.7	2.2	3.5	2.1
SW	.6	1.8	1.1	1.7	2.2	3.5	2.1
WSW	.6	1.8	1.1	1.7	2.2	3.5	2.1
W	.6	1.8	1.1	1.7	2.2	3.5	2.1
WNW	.6	1.8	1.1	1.7	2.2	3.5	2.1
W	.6	1.8	1.1	1.7	2.2	3.5	2.1
WNW	.6	1.8	1.1	1.7	2.2	3.5	2.1
NW	.6	1.8	1.1	1.7	2.2	3.5	2.1
NNW	.6	1.8	1.1	1.7	2.2	3.5	2.1
N	.6	1.8	1.1	1.7	2.2	3.5	2.1
WIND CALM	11.1					11.1	
TOT	20.5	28.7	31.1	19.2	5.8	13.3	1.1
TOTAL NUMBER OF OBSERVATIONS						100.0	7.9

FEBRUARY

Dir.	Speed in Knts					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	.7	1.2	2.2	.6	1.1	4.8	1.4
NNE	.7	1.2	2.2	.6	1.1	4.8	1.4
NE	.7	1.2	2.2	.6	1.1	4.8	1.4
NNE	.7	1.2	2.2	.6	1.1	4.8	1.4
E	.7	1.2	2.2	.6	1.1	4.8	1.4
ESE	.7	1.2	2.2	.6	1.1	4.8	1.4
SE	.7	1.2	2.2	.6	1.1	4.8	1.4
SSE	.7	1.2	2.2	.6	1.1	4.8	1.4
S	.7	1.2	2.2	.6	1.1	4.8	1.4
SSW	.7	1.2	2.2	.6	1.1	4.8	1.4
SW	.7	1.2	2.2	.6	1.1	4.8	1.4
WSW	.7	1.2	2.2	.6	1.1	4.8	1.4
W	.7	1.2	2.2	.6	1.1	4.8	1.4
WNW	.7	1.2	2.2	.6	1.1	4.8	1.4
W	.7	1.2	2.2	.6	1.1	4.8	1.4
WNW	.7	1.2	2.2	.6	1.1	4.8	1.4
NW	.7	1.2	2.2	.6	1.1	4.8	1.4
NNW	.7	1.2	2.2	.6	1.1	4.8	1.4
N	.7	1.2	2.2	.6	1.1	4.8	1.4
WIND CALM	10.9					10.9	
TOT	20.0	19.7	32.0	20.5	6.1	11.6	1.1
TOTAL NUMBER OF OBSERVATIONS						100.0	8.2

MARCH

Dir.	Speed in Knts					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	.7	1.3	2.4	.9	1.2	5.3	1.9
NNE	.7	1.3	2.4	.9	1.2	5.3	1.9
NE	.7	1.3	2.4	.9	1.2	5.3	1.9
NNE	.7	1.3	2.4	.9	1.2	5.3	1.9
E	.7	1.3	2.4	.9	1.2	5.3	1.9
ESE	.7	1.3	2.4	.9	1.2	5.3	1.9
SE	.7	1.3	2.4	.9	1.2	5.3	1.9
SSE	.7	1.3	2.4	.9	1.2	5.3	1.9
S	.7	1.3	2.4	.9	1.2	5.3	1.9
SSW	.7	1.3	2.4	.9	1.2	5.3	1.9
SW	.7	1.3	2.4	.9	1.2	5.3	1.9
WSW	.7	1.3	2.4	.9	1.2	5.3	1.9
W	.7	1.3	2.4	.9	1.2	5.3	1.9
WNW	.7	1.3	2.4	.9	1.2	5.3	1.9
W	.7	1.3	2.4	.9	1.2	5.3	1.9
WNW	.7	1.3	2.4	.9	1.2	5.3	1.9
NW	.7	1.3	2.4	.9	1.2	5.3	1.9
NNW	.7	1.3	2.4	.9	1.2	5.3	1.9
N	.7	1.3	2.4	.9	1.2	5.3	1.9
WIND CALM	8.9					8.9	
TOT	15.8	19.8	32.9	23.5	6.0	11.5	1.1
TOTAL NUMBER OF OBSERVATIONS						100.0	8.6

APRIL

Dir.	Speed in Knts					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	.7	1.2	2.0	.7	1.1	4.7	1.4
NNE	.7	1.2	2.0	.7	1.1	4.7	1.4
NE	.7	1.2	2.0	.7	1.1	4.7	1.4
NNE	.7	1.2	2.0	.7	1.1	4.7	1.4
E	.7	1.2	2.0	.7	1.1	4.7	1.4
ESE	.7	1.2	2.0	.7	1.1	4.7	1.4
SE	.7	1.2	2.0	.7	1.1	4.7	1.4
SSE	.7	1.2	2.0	.7	1.1	4.7	1.4
S	.7	1.2	2.0	.7	1.1	4.7	1.4
SSW	.7	1.2	2.0	.7	1.1	4.7	1.4
SW	.7	1.2	2.0	.7	1.1	4.7	1.4
WSW	.7	1.2	2.0	.7	1.1	4.7	1.4
W	.7	1.2	2.0	.7	1.1	4.7	1.4
WNW	.7	1.2	2.0	.7	1.1	4.7	1.4
W	.7	1.2	2.0	.7	1.1	4.7	1.4
WNW	.7	1.2	2.0	.7	1.1	4.7	1.4
NW	.7	1.2	2.0	.7	1.1	4.7	1.4
NNW	.7	1.2	2.0	.7	1.1	4.7	1.4
N	.7	1.2	2.0	.7	1.1	4.7	1.4
WIND CALM	9.6					9.6	
TOT	17.4	18.8	34.5	22.7	5.3	11.1	1.1
TOTAL NUMBER OF OBSERVATIONS						100.0	8.4

MCGUIRE AFB, WRIGHTSTOWN, NEW JERSEY

WIND ROSES

SEPTEMBER

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
VARBL	0	0	0	0	0	0	0
CALM	0	0	0	0	0	0	0
TOT	0	0	0	0	0	0	0

OCTOBER

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
VARBL	0	0	0	0	0	0	0
CALM	0	0	0	0	0	0	0
TOT	0	0	0	0	0	0	0

NOVEMBER

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
VARBL	0	0	0	0	0	0	0
CALM	0	0	0	0	0	0	0
TOT	0	0	0	0	0	0	0

DECEMBER

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
VARBL	0	0	0	0	0	0	0
CALM	0	0	0	0	0	0	0
TOT	0	0	0	0	0	0	0

ANNUAL

Dir.	Speed in Knots					Total	Mean Speed
	0-3	4-6	7-10	11-16	17-21		
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0
VARBL	0	0	0	0	0	0	0
CALM	0	0	0	0	0	0	0
TOT	0	0	0	0	0	0	0

SHAW AFB SUMTER, SOUTH CAROLINA (Lat. 33°58'N, Long. 80°29'W, Elev. 242 ft.)

Shaw AFB is located in the upper central plain, six miles west-northwest of Sumter and 30 miles east of Columbia. The Watertee River is nine miles west and Lake Marion 18 miles southwest. The fall line or division between the hilly Piedmont and the generally level Coastal Plain is near Columbia. Toward the southeast the elevation decreases rapidly from 300 feet to 100 feet and then decreases slowly toward the Atlantic Ocean about 80 miles from the airfield. The area surrounding the airfield is mostly wooded with some marshes interspersed.

Weather conditions in this area are influenced by the nearness of the Atlantic Ocean and the position of the Bermuda High. Southeast to easterly circulation brings moisture upslope to the upper coastal plain. This circulation frequently results in night and early morning stratus or fog, with the maximum occurrence in December and January. From December through March occasional snow and freezing rain can be expected and accounts for some of the most adverse flying conditions. The best flying conditions exist from late September to early November.

From fall through spring the thunderstorms that occur will be associated with fronts or squall lines. Most of the summer thunderstorms, from May through September, are of the air mass type with the maximum occurrence in July. During this period when radiational heating and cooling are the dominant weather controls, sky cover varies directly with the development and dissipation of the cumuliform clouds.

SHAW AFB (Cont'd.)

Tropical storms affect this area from June through December with the maximum occurrence in September.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from January 1946-December 1966; with the exception of cloud cover for which data are not available prior to 1946.

SHAW AFB SUMTER, SOUTH CAROLINA

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	56.8	59.7	65.3	75.1	83.3	88.8	89.8	89.2	83.8	75.3	65.9	56.4	74.2
Mean	47.5	49.8	55.3	64.5	73.0	79.2	80.8	80.1	74.8	65.3	55.7	47.1	64.5
Minimum	37.8	39.7	45.1	53.6	62.4	69.4	71.7	70.8	65.7	55.0	45.2	37.6	54.5

Record Temperature Extremes

Maximum	81	82	89	92	99	104	103	102	101	99	88	80
Minimum	15	9	22	32	40	51	59	56	44	30	16	8
	Period of Record: 1942-1965											

MONTHLY MEANS

Precipitation (Inches)

Precipitation	3.00	3.55	4.25	3.59	2.95	4.65	5.71	4.96	4.05	2.77	2.46	3.10	45.02
Snowfall*	.2	.3	.2	T	.0	.0	.0	.0	.0	.0	T	.2	.9
	(*Hail was included in Snowfall Period of Record: 1942-1965 Summary prior to January 1956)												

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	S	W	WSW	WSW	WSW	WSW	NNE	ENE	E	NE	S	NE
Velocity	48	50	58	50	54	68	55	58	47	50	69	43
	Period of Record: 1947-1965											

Maximum and/or Minimum Anemometer Height: 50 feet 05/55; 13 feet 04/64

SHAW AFB, SUMTER, SOUTH CAROLINA

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY																FEBRUARY															
Hours	Number of Observations		Occurrences < 1/2 MI.		Occurrences < 1/4 MI.		Occurrences < 3/8 MI.		Occurrences < 1/2 MI.		Occurrences < 3/8 MI.		Occurrences < 1/2 MI.		Occurrences < 3/8 MI.		Occurrences < 1/2 MI.		Occurrences < 3/8 MI.		Occurrences < 1/2 MI.		Occurrences < 3/8 MI.		Occurrences < 1/2 MI.						
	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel					
00-02	2,325	4.0	19.5	35.0	45.6	.2	10.7	.4	.9	.....	11.7	16.5	12.9	.....	1.1	27.9	.....	1.7	1.8	.....	11.7	16.5	12.9	.....	1.1	27.9	.....			
03-05	2,325	4.1	23.4	40.2	44.2	.0	11.4	.3	.6	.....	12.1	21.0	14.4	.....	.0	34.9	.....	.0	34.9	.....	12.1	21.0	14.4	.....	.0	34.9	.....			
06-08	2,325	5.5	29.5	48.9	36.3	.1	12.2	.6	.6	.....	13.1	26.7	21.3	.....	.....	42.0	.....	.....	42.0	.....	13.1	26.7	21.3	.....	.....	42.0	.....			
09-11	2,323	1.9	25.4	41.4	32.6	.....	10.8	.6	.9	.....	12.0	17.7	20.0	.....	34.6	.....	.....	34.6	.....	12.0	17.7	20.0	.....	34.6	.....	.....	34.6	.....		
12-14	2,324	.5	19.1	31.5	32.4	.....	9.7	.4	.5	.....	10.5	10.7	13.0	.....	1.1	22.7	.....	1.1	22.7	.....	10.5	10.7	13.0	.....	1.1	22.7	.....	1.1	22.7
15-17	2,325	.6	16.7	27.0	32.4	.0	9.9	.3	.7	.....	10.6	9.8	10.9	.....	.....	19.8	.....	.....	19.8	.....	10.6	9.8	10.9	.....	.....	19.8	.....	.....	19.8
18-20	2,325	1.0	15.4	29.9	41.0	.0	10.2	.4	.6	.....	11.1	11.0	14.3	.....	.0	24.3	.....	.0	24.3	.....	11.1	11.0	14.3	.....	.0	24.3	.....	.0	24.3
21-23	2,320	2.3	16.8	31.1	47.5	.0	9.7	.1	.8	.....	10.6	12.3	13.7	.....	.0	24.9	.....	.0	24.9	.....	10.6	12.3	13.7	.....	.0	24.9	.....	.0	24.9
All Hours	16,592	2.5	20.8	35.6	39.0	.1	10.6	.4	.7	.....	11.5	15.7	15.1	.....	.0	28.6	.....	.0	28.6	.....	11.5	15.7	15.1	.....	.0	28.6	.....	.0	28.6

MARCH																APRIL															
Hours	Number of Observations		Occurrences < 1/2 MI.		Occurrences < 1/4 MI.		Occurrences < 3/8 MI.		Occurrences < 1/2 MI.		Occurrences < 3/8 MI.		Occurrences < 1/2 MI.		Occurrences < 3/8 MI.		Occurrences < 1/2 MI.		Occurrences < 3/8 MI.		Occurrences < 1/2 MI.		Occurrences < 3/8 MI.		Occurrences < 1/2 MI.						
	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel	Obs	Rel					
00-02	2,315	1.8	16.8	29.8	48.3	.6	12.0	.1	.3	.....	12.4	12.0	9.9	.....	.2	21.5	.....	.2	21.5	.....	12.4	12.0	9.9	.....	.2	21.5	.....	.2	21.5
03-05	2,316	3.5	19.7	34.6	47.1	.3	12.3	.....	.1	.....	12.3	17.1	11.3	.....	.....	26.2	.....	.....	26.2	.....	12.3	17.1	11.3	.....	.....	26.2	.....	.....	26.2
06-08	2,315	3.5	25.1	45.4	37.4	.3	12.2	.....	.2	.....	12.2	25.2	22.4	.0	.....	41.7	.....	.....	41.7	.....	12.2	25.2	22.4	.0	.....	41.7	.....	.....	41.7
09-11	2,316	.6	19.2	34.6	34.7	.2	11.7	.3	.4	.....	12.3	12.1	15.8	.....	.2	26.1	.....	.2	26.1	.....	12.3	12.1	15.8	.....	.2	26.1	.....	.2	26.1
12-14	2,314	.4	14.1	28.8	32.2	.3	9.9	.2	.4	.....	10.5	7.6	7.5	.....	.8	15.2	.....	.8	15.2	.....	10.5	7.6	7.5	.....	.8	15.2	.....	.8	15.2
15-17	2,314	.3	12.5	23.6	31.4	.3	10.2	.1	.2	.....	10.5	7.1	5.0	.....	.7	12.4	.....	.7	12.4	.....	10.5	7.1	5.0	.....	.7	12.4	.....	.7	12.4
18-20	2,316	.8	12.8	23.4	39.9	.5	10.1	.2	.2	.....	10.4	8.4	8.4	.....	.4	16.5	.....	.4	16.5	.....	10.4	8.4	8.4	.....	.4	16.5	.....	.4	16.5
21-23	2,315	1.7	12.9	24.4	49.1	.3	10.2	.1	.2	.....	10.6	9.4	9.8	.....	.3	19.1	.....	.3	19.1	.....	10.6	9.4	9.8	.....	.3	19.1	.....	.3	19.1
All Hours	18,321	1.7	16.6	30.6	40.1	.3	11.1	.1	.3	.....	11.4	12.4	11.3	.0	.3	22.4	.....	.3	22.4	.....	11.4	12.4	11.3	.0	.3	22.4	.....	.3	22.4

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

SHAW AFB, SUMTER, SOUTH CAROLINA

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY														JUNE																	
Hours	Number of Observations	Ceilings < 200 Ft and/or Visibility < 3 MI	Ceilings < 1000 Ft and/or Visibility < 5 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrence of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrence of Obstructions to Vision	Hours	Number of Observations	Ceilings < 200 Ft and/or Visibility < 3 MI	Ceilings < 1000 Ft and/or Visibility < 5 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrence of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrence of Obstructions to Vision		
00-00	2,393	.7	10.1	17.0	55.6	.6	5.4	....	5.4	6.8	4.3	....	0	10.7	00-00	2,890	.3	9.0	17.0	54.0	1.6	5.3	....	....	....	5.3	6.3	5.2	....	10.8
03-05	2,384	2.9	17.5	32.1	49.6	.5	5.6	....	5.6	21.7	9.0	....	1	28.1	03-05	2,890	2.2	16.6	31.6	45.6	.4	4.2	....	....	....	4.2	22.8	9.3	....	29.4
06-08	2,384	2.8	22.2	39.8	36.1	.3	5.3	....	5.3	23.3	17.2	....	....	36.9	06-08	2,849	3.7	20.8	37.1	36.1	.2	3.7	....	....	....	3.7	21.3	18.1	....	36.4
09-11	2,380	....	14.6	25.0	36.4	.2	4.2	....	4.2	3.1	8.0	....	1	10.8	09-11	2,890	....	14.3	25.8	33.9	.2	4.1	....	....	....	4.1	2.0	9.1	....	10.7
12-14	2,384	1	7.1	24.3	27.4	1.1	4.9	....	4.9	1.4	2.5	....	1	3.8	12-14	2,849	....	6.1	24.9	21.7	2.3	5.5	....	....	....	5.5	.4	3.9	....	4.3
15-17	2,384	.3	5.2	16.2	27.9	3.7	5.8	5.8	1.2	2.2	1	3.2	15-17	2,847	.2	4.4	17.2	23.9	5.6	7.4	7.4	.4	2.9	0	3.3
18-20	2,384	1	4.8	12.3	36.2	2.9	6.3	6.3	1.5	3.7	1	5.0	18-20	2,890	4.9	14.8	30.8	5.7	8.5	8.5	1.1	3.9	1	5.1
21-23	2,384	.3	5.6	12.5	51.8	2.4	6.5	6.5	2.5	2.6	1	4.9	21-23	2,890	1	4.5	12.0	46.4	3.3	7.0	7.0	1.8	4.4	0	6.1
All Hours	18,587	.9	10.9	22.4	46.1	1.4	5.5	5.5	7.7	6.2	1	12.9	All Hours	17,995	.6	10.1	22.5	36.6	2.4	5.7	5.7	7.0	7.1	0	13.2

JULY														AUGUST																	
Hours	Number of Observations	Ceilings < 200 Ft and/or Visibility < 3 MI	Ceilings < 1000 Ft and/or Visibility < 5 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrence of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrence of Obstructions to Vision	Hours	Number of Observations	Ceilings < 200 Ft and/or Visibility < 3 MI	Ceilings < 1000 Ft and/or Visibility < 5 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrence of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrence of Obstructions to Vision		
00-00	2,695	.3	8.5	16.2	48.9	1.2	4.9	....	4.9	7.4	4.1	....	....	10.3	00-00	2,823	.9	8.3	16.5	54.8	1.6	5.2	....	....	....	5.2	9.0	5.7	....	14.3
03-05	2,696	2.2	15.9	29.6	45.3	.8	3.6	....	3.6	23.0	6.6	....	....	26.8	03-05	2,825	3.7	18.0	33.5	53.5	.3	3.6	....	....	....	3.6	26.3	8.2	....	32.6
06-08	2,698	2.5	23.9	40.5	30.3	.6	2.8	....	2.9	24.5	13.5	....	....	34.4	06-08	2,823	4.7	25.2	48.1	35.4	.0	3.5	....	....	....	3.5	36.1	16.5	....	48.3
09-11	2,321	....	16.1	29.5	27.1	.3	4.0	....	4.0	2.3	8.1	....	....	10.2	09-11	2,824	1	15.3	27.8	33.4	.4	2.6	....	....	....	2.6	3.7	10.8	....	14.3
12-14	2,395	.2	6.4	31.9	36.3	3.8	5.8	....	5.8	.6	4.2	....	....	4.8	12-14	2,825	1	6.2	26.2	24.2	2.2	4.5	....	....	....	4.5	.8	6.0	....	6.8
15-17	2,324	.3	5.2	20.1	19.6	7.6	10.3	10.3	.7	2.1	0	2.8	15-17	2,824	.2	4.5	18.4	25.3	4.9	7.8	7.8	.9	5.0	1	5.9
18-20	2,324	....	5.0	14.6	23.7	7.3	9.8	....	9.8	1.4	3.2	....	....	4.5	18-20	2,823	1	5.7	14.8	31.9	5.4	8.7	....	....	....	8.7	2.3	5.5	....	7.5
21-23	2,324	....	5.5	14.3	30.5	4.3	8.5	....	8.5	2.1	3.0	....	....	4.9	21-23	2,820	....	5.5	13.4	48.5	3.9	5.7	....	....	....	6.7	3.0	5.4	....	8.4
All Hours	18,587	.7	10.2	24.7	31.3	3.2	6.2	6.2	7.7	5.6	0	12.3	All Hours	18,592	1.2	11.1	24.8	38.5	2.4	5.3	5.3	10.3	7.9	0	17.3

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

SHAW AFB, SUMTER, SOUTH CAROLINA

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER														OCTOBER																	
Hours	Number of Observations	Oeilings <200 Ft and/or Visibility <1/2 MI	Oeilings <200 Ft and/or Visibility <3/4 MI	Oeilings <400 Ft and/or Visibility <5/8 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of	Hours	Number of Observations	Oeilings <200 Ft and/or Visibility <1/2 MI	Oeilings <200 Ft and/or Visibility <3/4 MI	Oeilings <400 Ft and/or Visibility <5/8 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of			
00-02	2,950	1.7	14.9	25.4	56.6	6	6.5	11.5	6.6	17.2	6.5	11.5	6.6	17.2	6.5	11.5	6.6	17.2	6.5	11.5	6.6	63.2	1	7.5	7.5	7.5	7.5	7.5	7.5	7.5	19.8
03-05	2,950	6.5	24.8	41.1	82.5	2	7.5	29.1	7.2	34.1	7.5	29.1	7.2	34.1	7.5	29.1	7.2	34.1	7.5	29.1	7.2	60.4	3	7.6	7.6	7.6	7.6	7.6	7.6	7.6	28.9
06-08	2,848	7.9	32.8	53.7	80.1	2	7.7	39.0	14.5	49.0	7.7	39.0	14.5	49.0	7.7	39.0	14.5	49.0	7.7	39.0	14.5	49.8	2	6.7	6.7	6.7	6.7	6.7	6.7	6.7	45.5
09-11	2,847	2	23.7	36.1	34.8	0	6.7	7.4	9.3	16.1	6.7	7.4	9.3	16.1	6.7	7.4	9.3	16.1	6.7	7.4	9.3	49.3	0	6.2	6.2	6.2	6.2	6.2	6.2	28.4	
12-14	2,950	2	11.3	30.4	28.1	9	7.8	2.3	3.9	6.1	7.8	2.3	3.9	6.1	7.8	2.3	3.9	6.1	7.8	2.3	3.9	49.0	0	5.8	5.8	5.8	5.8	5.8	5.8	9.4	
15-17	2,849	1	8.3	19.3	31.6	1.6	8.5	2.6	2.7	5.2	8.5	2.6	2.7	5.2	8.5	2.6	2.7	5.2	8.5	2.6	2.7	47.0	3	5.9	5.9	5.9	5.9	5.9	5.9	6.9	
18-20	2,849	1	8.0	18.1	42.4	1.8	8.9	3.9	4.6	8.3	8.9	3.9	4.6	8.3	8.9	3.9	4.6	8.3	8.9	3.9	4.6	57.2	3	5.6	5.6	5.6	5.6	5.6	5.6	12.2	
21-23	2,850	5	9.7	18.7	55.3	1.0	6.9	5.1	5.7	10.7	6.9	5.1	5.7	10.7	6.9	5.1	5.7	10.7	6.9	5.1	5.7	63.8	2	7.1	7.1	7.1	7.1	7.1	7.1	18.2	
All Hours 17,993	212	16.7	30.3	42.4	8	7.6	6.8	12.6	6.8	18.3	7.6	12.6	6.8	18.3	7.6	12.6	6.8	18.3	7.6	12.6	6.8	54.5	2	6.6	6.6	6.6	6.6	6.6	6.6	20.2	

NOVEMBER														DECEMBER																
Hours	Number of Observations	Oeilings <200 Ft and/or Visibility <1/2 MI	Oeilings <200 Ft and/or Visibility <3/4 MI	Oeilings <400 Ft and/or Visibility <5/8 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of	Hours	Number of Observations	Oeilings <200 Ft and/or Visibility <1/2 MI	Oeilings <200 Ft and/or Visibility <3/4 MI	Oeilings <400 Ft and/or Visibility <5/8 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of		
00-02	2,950	3.4	15.6	28.2	55.7	1	7.8	13.2	9.3	21.3	7.8	13.2	9.3	21.3	7.8	13.2	9.3	21.3	7.8	13.2	9.3	52.2	1	10.0	10.0	10.0	10.0	10.0	10.0	24.3
03-05	2,847	5.6	20.9	35.7	55.2	1	8.4	20.2	10.7	28.7	8.4	20.2	10.7	28.7	8.4	20.2	10.7	28.7	8.4	20.2	10.7	50.7	1	10.2	10.2	10.2	10.2	10.2	10.2	29.2
06-08	2,950	6.5	26.5	45.3	45.1	0	8.2	28.8	19.3	42.2	8.3	28.8	19.3	42.2	8.3	28.8	19.3	42.2	8.3	28.8	19.3	41.0	0	11.2	11.2	11.2	11.2	11.2	11.2	39.1
09-11	2,849	1.4	19.6	31.1	44.5	0	6.8	11.9	17.1	26.8	6.8	11.9	17.1	26.8	6.8	11.9	17.1	26.8	6.8	11.9	17.1	37.1	0	10.4	10.4	10.4	10.4	10.4	10.4	31.1
12-14	2,950	2	11.6	21.0	42.4	2	5.3	4.3	8.1	12.1	5.3	4.3	8.1	12.1	5.3	4.3	8.1	12.1	5.3	4.3	8.1	36.3	0	10.1	10.1	10.1	10.1	10.1	10.1	16.4
15-17	2,950	1	8.8	18.7	43.2	2	6.5	3.9	6.6	10.3	6.5	3.9	6.6	10.3	6.5	3.9	6.6	10.3	6.5	3.9	6.6	37.5	0	9.3	9.3	9.3	9.3	9.3	9.3	15.6
18-20	2,950	6	7.9	20.2	51.2	2	6.3	4.6	10.0	14.3	6.3	4.6	10.0	14.3	6.3	4.6	10.0	14.3	6.3	4.6	10.0	45.0	2	9.5	9.5	9.5	9.5	9.5	9.5	20.7
21-23	2,950	8	10.5	21.7	56.1	2	6.9	6.9	10.0	16.0	6.9	6.9	10.0	16.0	6.9	6.9	10.0	16.0	6.9	6.9	10.0	50.8	1	8.9	8.9	8.9	8.9	8.9	8.9	26.6
All Hours 17,996	2.3	15.2	27.7	49.2	1.1	7.0	6.8	11.7	11.4	21.5	7.0	11.7	11.4	21.5	7.0	11.7	11.4	21.5	7.0	11.7	11.4	43.8	1	10.0	10.0	10.0	10.0	10.0	10.0	24.9

ANNUAL																
Hours	Number of Observations	Oeilings <200 Ft and/or Visibility <1/2 MI	Oeilings <200 Ft and/or Visibility <3/4 MI	Oeilings <400 Ft and/or Visibility <5/8 MI	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of
All Hours 238,915	1.6	14.7	18.1	41.7	1.0	7.9	1.1	1.1	0	19.7	8.0	11.1	9.9	0	1	19.7

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

SHAW AFB, SUMTER, SOUTH CAROLINA
WIND ROSES

JANUARY

Dir.	Speed in Knots				Total Obsd
	1-6	7-10	11-15	16-20	
K	1.4	2.7	5.5	1.1	6.9
N	1.4	2.0	2.1	1.2	6.7
NE	1.5	2.4	3.1	1.2	8.4
E	1.6	3.1	3.2	1.2	8.4
SE	1.6	1.1	2.9	2.1	3.0
S	1.3	3.3	4.5	1.0	6.0
SW	2.3	1.4	2.1	1.1	1.8
W	1.4	1.7	1.5	1.1	1.3
WNW	1.0	2.0	2.8	1.2	3.1
WSW	1.0	2.0	2.3	1.3	7.8
W	1.7	1.8	1.5	1.5	1.6
NW	1.7	1.8	1.6	1.5	4.7
NNW	1.7	1.8	1.5	1.4	6.9
N	1.7	1.8	1.5	1.4	6.1
VALE	.7	1.2	1.3	1.4	4.0
CALM	21.0				21.0
TOT	35.9	24.6	26.6	11.0	100.0

TOTAL NUMBER OF OBSERVATIONS: 1092

FEBRUARY

Dir.	Speed in Knots				Total
	1-3	4-6	7-10	11-16	
K	1.0	1.6	1.7	1.0	5.3
N	1.1	2.1	2.0	1.2	6.4
NE	1.4	2.6	3.0	1.3	8.0
E	1.4	2.6	3.0	1.3	8.0
SE	.9	1.2	1.2	1.3	4.6
S	1.3	.9	1.2	1.3	4.7
SW	1.3	.9	1.2	1.3	4.7
W	1.4	1.5	1.6	1.4	5.9
WNW	1.4	1.5	1.6	1.4	5.9
WSW	1.2	2.0	2.5	1.4	7.1
W	1.7	2.0	2.5	1.4	8.1
NW	1.7	2.0	2.5	1.4	8.1
NNW	1.7	2.0	2.5	1.4	8.1
N	1.7	2.0	2.5	1.4	8.1
VALE	.7	2.0	2.0	1.8	6.5
CALM	17.8				17.8
TOT	31.2	26.3	27.5	12.4	100.0

TOTAL NUMBER OF OBSERVATIONS: 1693

MARCH

Dir.	Speed in Knots				Total
	1-5	6-10	11-15	16-20	
K	.8	1.6	1.0	.1	3.2
N	.7	1.6	2.0	.1	5.4
NE	1.2	2.1	2.7	.2	7.3
E	1.2	2.1	2.7	.2	7.3
SE	1.8	1.3	1.9	.7	4.7
S	1.3	1.6	2.0	.8	6.7
SW	1.4	1.7	2.1	.8	6.0
W	1.1	2.0	2.3	.9	6.3
WNW	1.1	2.0	2.3	.9	6.3
WSW	1.1	2.0	2.3	.9	6.3
W	1.1	2.0	2.3	.9	6.3
NW	1.2	2.1	2.4	.9	7.2
NNW	1.2	2.1	2.4	.9	7.2
N	1.2	2.1	2.4	.9	7.2
VALE	.4	.7	.8	.5	1.4
CALM	15.3				15.3
TOT	27.3	24.9	30.5	14.5	100.0

TOTAL NUMBER OF OBSERVATIONS: 1392

APRIL

Dir.	Speed in Knots				Total
	1-3	4-6	7-10	11-16	
K	.7	1.5	1.6	.3	3.8
N	.8	1.6	2.0	.3	4.9
NE	.8	1.6	2.0	.3	4.9
E	.7	1.4	1.7	.5	4.3
SE	1.5	1.8	1.6	.3	5.2
S	1.8	2.9	3.2	.7	6.6
SW	1.8	2.9	3.2	.7	6.6
W	1.1	2.8	3.8	1.8	9.5
WNW	1.1	2.8	3.8	1.8	9.5
WSW	1.1	2.8	3.8	1.8	9.5
W	1.1	2.8	3.8	1.8	9.5
NW	.5	1.9	3.9	1.6	7.9
NNW	.5	1.9	3.9	1.6	7.9
N	.5	1.9	3.9	1.6	7.9
VALE	.4	1.1	1.4	.4	3.4
CALM	13.8				13.8
TOT	25.0	26.2	32.3	13.6	100.0

TOTAL NUMBER OF OBSERVATIONS: 1779

SHAW AFB, SUMTER, SOUTH CAROLINA WIND ROSES

MAY												
Dir.	Speed in Knots											
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	56	Mean Wind Speed
N	.7	1.4	1.2	.3	.0	.0	.0	.0	.0	.0	.0	1.7
NNE	1.1	1.9	2.4	1.0	.1	.0	.0	.0	.0	.0	.0	6.5
NRE	1.7	1.4	1.7	.7	.0	.0	.0	.0	.0	.0	.0	7.2
E	1.4	1.0	1.2	.4	.0	.0	.0	.0	.0	.0	.0	5.7
ESE	1.4	1.0	1.0	.4	.0	.0	.0	.0	.0	.0	.0	2.9
SE	.7	1.5	1.4	.3	.0	.0	.0	.0	.0	.0	.0	6.2
SSE	1.9	1.0	2.4	.6	.0	.0	.0	.0	.0	.0	.0	1.9
S	1.8	3.0	2.7	.5	.1	.0	.0	.0	.0	.0	.0	6.5
SSW	1.4	2.9	3.1	.9	.1	.0	.0	.0	.0	.0	.0	7.9
SW	1.8	2.2	2.3	1.7	.1	.0	.0	.0	.0	.0	.0	9.4
WSW	1.1	2.8	2.2	.5	.0	.0	.0	.0	.0	.0	.0	6.6
W	1.1	1.6	1.1	.2	.0	.0	.0	.0	.0	.0	.0	7.3
WNW	.8	1.6	1.1	.2	.0	.0	.0	.0	.0	.0	.0	5.6
WV	.8	1.6	1.1	.2	.0	.0	.0	.0	.0	.0	.0	6.1
VARBL	.4	1.0	.8	.2	.0	.0	.0	.0	.0	.0	.0	3.6
CALM	.4	1.0	.8	.2	.0	.0	.0	.0	.0	.0	.0	2.8
TOT	31.0	36.7	29.3	8.3	.6	.0	.0	.0	.0	.0	.0	16.3
TOTAL NUMBER OF OBSERVATIONS: 1897A												

JUNE												
Dir.	Speed in Knots											
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	56	Mean Wind Speed
N	.9	1.5	1.2	.8	.1	.0	.0	.0	.0	.0	.0	3.6
NNE	1.3	2.4	2.5	.8	.0	.0	.0	.0	.0	.0	.0	4.6
NRE	1.0	2.2	2.0	.3	.0	.0	.0	.0	.0	.0	.0	7.0
E	.5	1.2	.9	.2	.0	.0	.0	.0	.0	.0	.0	5.6
ESE	.8	1.5	1.5	.5	.0	.0	.0	.0	.0	.0	.0	6.1
SE	1.8	3.0	2.7	.5	.1	.0	.0	.0	.0	.0	.0	4.3
SSE	1.7	3.6	3.5	.8	.1	.0	.0	.0	.0	.0	.0	6.8
S	1.9	2.2	2.4	.5	.0	.0	.0	.0	.0	.0	.0	7.8
SSW	1.9	2.2	2.4	.5	.0	.0	.0	.0	.0	.0	.0	9.7
SW	1.9	2.2	2.4	.5	.0	.0	.0	.0	.0	.0	.0	6.2
WSW	1.5	1.3	.7	.1	.0	.0	.0	.0	.0	.0	.0	5.7
W	.9	1.3	.7	.1	.0	.0	.0	.0	.0	.0	.0	2.6
WNW	.6	.9	.7	.1	.0	.0	.0	.0	.0	.0	.0	2.4
WV	.6	.9	.7	.1	.0	.0	.0	.0	.0	.0	.0	2.0
VARBL	.4	.9	.7	.1	.0	.0	.0	.0	.0	.0	.0	2.4
CALM	.4	.9	.7	.1	.0	.0	.0	.0	.0	.0	.0	2.0
TOT	34.5	30.9	27.5	6.5	.5	.0	.0	.0	.0	.0	.0	18.4
TOTAL NUMBER OF OBSERVATIONS: 1799B												

JULY												
Dir.	Speed in Knots											
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	56	Mean Wind Speed
N	.8	1.0	.7	.1	.0	.0	.0	.0	.0	.0	.0	4.7
NNE	1.4	2.6	2.5	.7	.1	.0	.0	.0	.0	.0	.0	6.7
NRE	1.7	1.5	1.3	.4	.0	.0	.0	.0	.0	.0	.0	6.1
E	1.5	1.3	1.3	.4	.0	.0	.0	.0	.0	.0	.0	5.8
ESE	1.5	1.9	1.6	.1	.0	.0	.0	.0	.0	.0	.0	2.1
SE	.8	1.5	1.0	.5	.0	.0	.0	.0	.0	.0	.0	5.9
SSE	2.5	4.3	4.0	.6	.0	.0	.0	.0	.0	.0	.0	6.3
S	2.9	4.3	4.0	.6	.0	.0	.0	.0	.0	.0	.0	3.9
SSW	2.0	4.3	4.0	.6	.0	.0	.0	.0	.0	.0	.0	10.3
SW	2.0	4.3	4.0	.6	.0	.0	.0	.0	.0	.0	.0	11.4
WSW	1.1	2.6	2.3	.4	.0	.0	.0	.0	.0	.0	.0	6.3
W	1.2	2.6	2.3	.4	.0	.0	.0	.0	.0	.0	.0	6.2
WNW	1.5	1.8	1.2	.2	.0	.0	.0	.0	.0	.0	.0	2.1
WV	1.5	1.8	1.2	.2	.0	.0	.0	.0	.0	.0	.0	5.3
VARBL	.4	.7	.3	.0	.0	.0	.0	.0	.0	.0	.0	1.7
CALM	.4	.7	.3	.0	.0	.0	.0	.0	.0	.0	.0	1.5
TOT	36.3	33.4	24.5	5.3	.4	.0	.0	.0	.0	.0	.0	19.1
TOTAL NUMBER OF OBSERVATIONS: 1899C												

AUGUST												
Dir.	Speed in Knots											
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	56	Mean Wind Speed
N	1.1	1.5	1.8	.6	.0	.0	.0	.0	.0	.0	.0	3.6
NNE	1.3	2.3	2.0	.6	.0	.0	.0	.0	.0	.0	.0	6.0
NRE	1.8	3.5	2.0	.6	.0	.0	.0	.0	.0	.0	.0	6.2
E	1.7	1.8	1.2	.2	.0	.0	.0	.0	.0	.0	.0	4.7
ESE	1.6	1.0	.5	.1	.0	.0	.0	.0	.0	.0	.0	5.5
SE	1.0	1.4	1.0	.3	.0	.0	.0	.0	.0	.0	.0	5.7
SSE	1.0	1.4	1.0	.3	.0	.0	.0	.0	.0	.0	.0	3.7
S	2.2	3.0	2.6	.3	.0	.0	.0	.0	.0	.0	.0	5.0
SSW	2.0	3.9	2.4	.3	.0	.0	.0	.0	.0	.0	.0	8.2
SW	2.0	3.9	2.4	.3	.0	.0	.0	.0	.0	.0	.0	8.7
WSW	1.0	2.4	1.3	.2	.0	.0	.0	.0	.0	.0	.0	4.2
W	1.5	1.3	.4	.2	.0	.0	.0	.0	.0	.0	.0	2.5
WNW	.8	1.3	.3	.1	.0	.0	.0	.0	.0	.0	.0	2.3
WV	.8	1.3	.3	.1	.0	.0	.0	.0	.0	.0	.0	2.3
VARBL	.4	.9	.3	.1	.0	.0	.0	.0	.0	.0	.0	2.3
CALM	.4	.9	.3	.1	.0	.0	.0	.0	.0	.0	.0	2.3
TOT	41.9	31.3	20.1	4.2	.4	.1	.0	.0	.0	.0	.0	100.0
TOTAL NUMBER OF OBSERVATIONS: 1899D												

**SHAW AFB, SUMTER, SOUTH CAROLINA
WIND ROSES**

SEPTEMBER

Dir.	Speed in Knots				Total	Mean Wind Speed
	11-15	16-20	21-25	26-30		
N	1.0	1.9	4.1	6.2	4.7	6.4
NNE	1.6	3.1	4.1	10.6	10.6	7.8
NSE	2.3	2.1	2.6	7.1	7.1	7.2
E	1.2	2.4	3.8	4.0	5.9	5.9
ESE	1.4	1.2	1.0	3.2	3.2	5.3
SE	1.5	1.2	1.9	2.7	2.7	5.7
SSE	1.0	1.7	1.3	4.1	4.1	5.4
S	1.2	2.3	1.5	5.3	5.3	6.1
SSW	1.1	1.7	2.8	3.7	3.7	6.1
SW	1.7	1.7	2.8	1.9	1.9	5.6
WSW	1.6	1.0	4.4	1.9	1.9	5.6
W	1.1	1.7	2.8	1.9	1.9	5.6
WNW	1.4	1.2	1.8	2.6	2.6	4.9
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ELLSWORTH AFB RAPID CITY, SOUTH DAKOTA (Lat. 44°09'N, Long. 103°06'W, Elev. 3286 ft.)

Ellsworth AFB is located about five miles northeast of Rapid City on the extreme eastern slopes of the Black Hills. The "Hills" flank Ellsworth to the southwest through the northwest with elevations exceeding 7200 feet within 30 miles of the base.

Poor flying conditions in the Ellsworth area occur most often from December through April. Most of these poor conditions are in the form of low stratus and fog, and are usually associated with upslope winds. Radiation fog is very infrequent and of short duration.

During the summer months from May through September, ground fog may form after the passage of a thundershower. The fog can lower visibilities below one mile; however, it seldom lasts more than one or two hours.

Thunderstorms occur most often in June, July and August. When compared with other areas of the United States the frequency of damaging hail is quite high.

Air pollution is no real problem to aviation in the Ellsworth vicinity.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from February 1939-May 1943, July 1943-June 1945 and April 1948-June 1967; with the exception of cloud cover for which data are not available prior to 1946.

ELLSWORTH AFB RAPID CITY, SOUTH DAKOTA

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	32.5	36.4	41.0	56.1	67.2	75.7	85.6	84.9	73.8	63.4	47.1	38.6	58.7
Mean	22.3	26.2	31.2	45.3	56.5	65.2	73.7	72.6	61.7	51.6	36.6	28.6	47.8
Minimum	11.9	15.6	21.2	34.2	45.5	54.4	61.5	60.1	49.3	39.7	26.0	18.4	36.6

Record Temperature Extremes

Maximum	68	72	80	87	97	105	108	106	103	94	77	74
Minimum	-25	-23	-18	7	20	31	42	41	19	14	-14	-22
	Period of Record: 1939-1945, 1948-1965											

MONTHLY MEANS

Precipitation (Inches)

Precipitation	.57	.72	1.02	1.68	3.08	3.16	1.63	1.60	.99	.67	.57	.40	16.08
Snowfall*	4.8	6.7	8.5	6.6	.9	.4	T	T	.2	1.0	3.7	4.1	36.7
(*Hail was included in Snowfall Summary prior to January 1956)													
	Period of Record: Precipitation 1943-1945, 1948-1965 Snowfall 1948-1965												

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	NNW	NW	N	W	WNW	WNW	NE	SSW	NNW	WNW	NW	NW
Velocity	62	61	78	72	59	70	70	63	53	55	65	62
	Period of Record: 1949-1963											

Maximum and/or Minimum Anemometer Height: 100 feet 04/53; 13 feet 04/56

ELLSWORTH AFB, RAPID CITY, SOUTH DAKOTA

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY												FEBRUARY											
Hours	Number of Observations	Ceilings <200 ft and/or Visibility <1/2 MI	Ceilings <2000 ft and/or Visibility <3 MI	Ceilings <4000 ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision							
00-09	2,891	2.5	18.5	18.1	47.5	.3	.2	15.5	....	15.9	2.7	4.2	....	6.9	6.9	6.9					
03-05	2,891	2.3	13.6	19.1	35.0	.6	.2	16.3	....	16.9	3.4	3.7	....	7.1	7.1	7.1					
06-08	2,890	2.6	14.0	20.1	33.6	.7	.1	14.8	....	15.4	4.6	3.4	....	7.9	7.9	7.9					
09-11	2,892	2.3	13.0	19.0	26.4	.5	....	14.1	....	14.6	5.7	1.1	3.3	1.1	9.0	9.0					
12-14	2,890	1.8	13.9	16.7	27.2	.4	.2	11.0	....	11.6	3.7	.0	4.0	1.1	7.8	7.8						
15-17	2,891	1.7	12.0	16.4	29.2	.6	.2	11.7	....	12.4	4.0	....	3.0	1.1	7.6	7.6					
18-20	2,892	2.6	12.0	17.6	46.0	.4	.1	14.3	....	14.7	3.7	....	3.7	....	7.8	7.8				
21-23	2,890	2.7	11.3	18.2	46.8	.6	....	14.4	....	14.9	3.5	....	4.6	....	7.5	7.5			
All Hours 18,387	2.3	12.6	18.2	37.0	....	.5	.1	14.0	....	14.6	3.9	.0	3.0	.0	7.6	7.6				

MARCH												APRIL											
Hours	Number of Observations	Ceilings <200 ft and/or Visibility <1/2 MI	Ceilings <2000 ft and/or Visibility <3 MI	Ceilings <4000 ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision							
00-09	2,417	4.2	18.6	26.2	43.2	.0	1.5	11.1	17.1	....	19.3	6.3	....	3.1	1.1	9.5					
03-05	2,415	4.4	20.0	27.4	40.2	....	.9	1.1	18.0	....	19.0	6.9	....	3.7	.2	10.8			
06-08	2,417	5.4	20.0	28.5	29.0	....	1.1	1.1	15.4	....	17.1	8.3	....	4.1	.2	12.5				
09-11	2,416	4.1	20.7	28.7	28.6	....	.8	.9	14.1	....	15.6	7.4	.2	4.0	.2	11.8				
12-14	2,412	2.5	16.2	24.4	22.3	....	1.3	.5	12.1	....	13.6	6.2	.1	3.0	.2	9.7					
15-17	2,413	2.6	15.0	22.6	23.7	.1	1.2	.3	12.2	....	13.7	6.1	.1	3.1	.3	9.2						
18-20	2,415	3.1	15.5	23.1	32.0	....	1.7	.0	13.7	....	15.5	6.4	.2	2.7	.3	9.5					
21-23	2,412	3.4	17.2	24.1	39.7	....	2.0	.7	14.2	....	17.0	5.4	.4	2.7	.2	9.5					
All Hours 19,418	3.7	16.2	25.4	31.8	.0	1.3	.8	14.7	....	16.5	6.6	.1	3.3	.1	10.2	10.2						

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

... indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

ELLSWORTH AFB, RAPID CITY, SOUTH DAKOTA

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY														JUNE																					
Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <3 MI	Occurrences <500 Ft and/or Visibility <3 MI	Occurrences <1000 Ft and/or Visibility <3 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of	Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <3 MI	Occurrences <500 Ft and/or Visibility <3 MI	Occurrences <1000 Ft and/or Visibility <3 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of				
00-02	2,900	2.1	11.8	16.8	45.1	0	2.1	0	0	6.0	0	0	0	0	6.0	00-02	2,340	1.9	10.6	15.7	44.1	2.1	9.9	0	0	0	0	0	16.0	0	0	0	0	16.0	
03-05	2,808	2.6	13.4	19.3	37.8	0	3.4	0	0	7.0	0	0	0	0	7.0	03-05	2,388	2.3	11.5	16.5	43.1	1.1	9.7	0	0	0	0	0	9.6	0	0	0	0	9.6	
06-08	2,809	1.2	15.7	21.2	31.5	0	8.4	0	0	7.7	0	0	0	0	7.7	06-08	2,339	1.6	13.9	17.5	39.1	0	9.4	0	0	0	0	0	9.4	0	0	0	0	9.4	
09-11	2,830	0.7	15.1	20.6	27.6	0	8.5	0	0	4.7	0	0	0	0	4.7	09-11	2,337	0.6	12.6	19.7	38.6	0	7.5	0	0	0	0	0	7.5	0	0	0	0	7.5	
12-14	2,911	0.5	12.1	18.9	22.5	0	9.1	0	0	3.7	0	0	0	0	3.7	12-14	2,336	0.3	8.6	19.0	31.0	0	3.3	0	0	0	0	0	3.3	0	0	0	0	3.3	
15-17	2,807	0.4	9.3	13.7	23.6	0	8.1	0	0	3.4	0	0	0	0	3.4	15-17	2,336	0.1	6.8	16.5	28.0	0	4.6	0	0	0	0	0	4.6	0	0	0	0	4.6	
18-20	2,876	0.7	6.5	12.6	27.1	0	10.1	0	0	3.5	0	0	0	0	3.5	18-20	2,333	0.8	6.4	14.6	30.4	0	3.7	0	0	0	0	0	3.7	0	0	0	0	3.7	
21-23	2,877	1.3	10.5	15.9	35.7	0	11.6	0	0	3.9	0	0	0	0	3.9	21-23	2,333	0.8	7.0	13.8	36.4	0	4.4	0	0	0	0	0	4.4	0	0	0	0	4.4	
All Hours	20,768	1.2	12.0	15.9	31.2	0	9.7	0	0	4.9	0	0	0	0	4.9	All Hours	18,694	1.0	9.7	16.6	37.3	2.6	9.1	0	0	0	0	0	0	9.2	0	0	0	0	9.2

JULY														AUGUST																					
Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <3 MI	Occurrences <500 Ft and/or Visibility <3 MI	Occurrences <1000 Ft and/or Visibility <3 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of	Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <3 MI	Occurrences <500 Ft and/or Visibility <3 MI	Occurrences <1000 Ft and/or Visibility <3 MI	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of				
00-02	2,899	1.1	2.7	4.6	60.3	1.7	3.5	0	0	3.5	0	0	0	0	3.5	00-02	2,385	0.6	2.7	5.2	63.9	1.6	4.6	0	0	0	0	0	4.6	0	0	0	0	4.6	
03-05	2,901	0.4	4.5	6.6	51.9	1.2	2.3	0	0	2.1	0	0	0	0	2.1	03-05	2,395	1.2	3.9	6.2	59.1	1.1	4.3	0	0	0	0	0	4.3	0	0	0	0	4.3	
06-08	2,801	0.6	6.0	8.8	51.9	0.4	2.6	0	0	2.7	0	0	0	0	2.7	06-08	2,383	0.5	4.9	6.7	58.3	0.3	3.2	0	0	0	0	0	3.2	0	0	0	0	3.2	
09-11	2,801	0.0	3.3	7.3	55.4	0.6	2.7	0	0	0.7	0	0	0	0	0.7	09-11	2,384	0.0	3.8	7.2	55.2	0.6	2.7	0	0	0	0	0	2.7	0	0	0	0	2.7	
12-14	2,801	0.0	1.4	6.2	53.8	0.3	5.1	0	0	0.7	0	0	0	0	0.7	12-14	2,385	0.0	2.7	6.2	54.3	0.5	4.3	0	0	0	0	4.3	0	0	0	0	4.3		
15-17	2,896	0.0	1.1	4.5	39.2	6.5	5.7	0	0	0.7	0	0	0	0	0.7	15-17	2,382	0.0	2.2	5.1	36.1	3.3	4.7	0	0	0	0	4.7	0	0	0	0	4.7		
18-20	2,897	0.0	1.4	4.5	43.4	5.1	5.6	0	0	0.5	0	0	0	0	0.5	18-20	2,380	0.0	2.1	4.2	47.3	3.1	4.7	0	0	0	0	4.7	0	0	0	0	4.7		
21-23	2,898	0.0	1.8	4.1	53.7	3.1	4.1	0	0	0.7	0	0	0	0	0.7	21-23	2,380	0.1	2.4	5.1	53.1	2.6	4.7	0	0	0	0	4.7	0	0	0	0	4.7		
All Hours	18,394	0.1	2.8	5.8	49.6	3.0	4.0	0	0	4.0	0	0	0	0	4.0	All Hours	18,054	0.3	3.1	5.8	51.5	1.9	4.6	0	0	0	0	0	0	4.2	0	0	0	0	4.2

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time
 A blank indicates that the data are not available.

ELLSWORTH AFB, RAPID CITY, SOUTH DAKOTA

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER														OCTOBER														NOVEMBER														DECEMBER														ANNUAL													
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 Mi	Cellings <2000 Ft and/or Visibility <3 Mi	Cellings <4000 Ft and/or Visibility <6 Mi	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 Mi	Cellings <2000 Ft and/or Visibility <3 Mi	Cellings <4000 Ft and/or Visibility <6 Mi	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 Mi	Cellings <2000 Ft and/or Visibility <3 Mi	Cellings <4000 Ft and/or Visibility <6 Mi	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision																			
00-02	2,249	8	6.1	9.4	51.7	2	5.6	0	4	6.0	2.0	0	0	0	0	2.0	00-02	2,395	1.3	7.6	11.2	61.2	0	4.0	4	2.3	0	6.5	2.2	1.1	1.1	0.0	2.5	00-02	18,999	7	7.5	11.3	53.4	0	4.3	1	2.0	0	6.3	2.4	0	0	0	2.6																			
03-05	2,249	1.2	7.7	11.6	59.5	2	6.2	0	5	6.6	2.9	0	0	0	0	2.9	03-05	2,392	1.3	8.7	11.6	60.1	0	4.0	1	3.3	0	6.9	2.8	0.2	0	0	3.1	03-05	18,999	7	7.5	11.3	53.4	0	4.3	1	2.0	0	6.3	2.4	0	0	0	2.6																			
06-08	2,250	1.3	8.8	12.4	59.2	0	5.2	0	1.0	5.9	3.2	0	0	0	0	3.2	06-08	2,399	9	8.7	12.5	59.4	0	4.1	1	2.5	0	6.3	3.8	0.1	0	0	4.0	06-08	18,999	7	7.5	11.3	53.4	0	4.3	1	2.0	0	6.3	2.4	0	0	0	2.6																			
09-11	2,250	2	8.9	13.3	47.2	2	5.4	0	0.6	5.8	2.3	0	0	0	0	2.3	09-11	2,395	4	9.0	12.6	47.3	0	4.3	0	1.8	0	6.0	2.8	0.1	0	0	2.9	09-11	18,999	7	7.5	11.3	53.4	0	4.3	1	2.0	0	6.3	2.4	0	0	0	2.6																			
12-14	2,249	1	6.0	11.5	46.1	4	4.3	0	5	4.7	1.4	0	0	0	0	1.5	12-14	2,395	2	6.9	11.7	46.7	0	3.8	0	1.1	0	4.9	2.1	0.3	0	0	2.4	12-14	18,999	7	7.5	11.3	53.4	0	4.3	1	2.0	0	6.3	2.4	0	0	0	2.6																			
15-17	2,249	1	5.1	9.7	42.4	1.3	6.2	0	5	6.5	1.5	0	0	0	0	1.6	15-17	2,394	1	5.9	10.3	45.9	0	4.2	1	1.3	0	5.5	2.1	0.3	0	0	2.4	15-17	18,999	7	7.5	11.3	53.4	0	4.3	1	2.0	0	6.3	2.4	0	0	0	2.6																			
18-20	2,250	0	5.6	8.9	48.9	1.3	5.4	0	5	5.7	1.8	0	0	0	0	1.9	18-20	2,395	4	5.9	9.9	55.1	1	5.2	1	1.9	0	7.2	2.1	0.2	0	0	2.3	18-20	18,999	7	7.5	11.3	53.4	0	4.3	1	2.0	0	6.3	2.4	0	0	0	2.6																			
21-23	2,250	6	5.5	8.9	58.1	0	5.2	0	4	5.6	1.7	0	0	0	0	1.7	21-23	2,394	7	7.3	10.2	61.5	0	4.9	3	2.0	0	7.1	1.2	0	1.1	0	1.5	21-23	18,999	7	7.5	11.3	53.4	0	4.3	1	2.0	0	6.3	2.4	0	0	0	2.6																			
All Hours	17,996	5	6.7	10.7	51.8	6	5.4	0	5	5.8	2.1	0	0	0	0	2.1	All Hours	18,999	7	7.5	11.3	53.4	0	4.3	1	2.0	0	6.3	2.4	0	1.1	0	1.5	All Hours	18,999	7	7.5	11.3	53.4	0	4.3	1	2.0	0	6.3	2.4	0	0	0	2.6																			

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
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BERGSTROM AFB, AUSTIN, TEXAS

(Lat. 30°12'N, Long. 97°40'W, Elev. 507 ft.)

Bergstrom AFB is situated seven miles southeast of Austin, Texas, on the west bank of the Colorado River. The airfield lies in a transition zone between the relatively flat farm land of the coastal plain to the east and the hilly brush covered Edwards Plateau to the west.

Flying weather in the Austin area is quite good throughout the year with the best conditions existing in late summer and early fall. Thunderstorms do occur in all months of the year, with May as the peak month. During the spring thunderstorms frequently occur in the form of squall lines and are often accompanied by strong winds and hail.

The most common restriction of ceilings in this region results from low stratus which form in the maritime air flowing upslope from the Gulf of Mexico. These low ceilings generally form about 1000 feet above the surface by midnight and then lower to 500 feet or below by morning. Such conditions occur most often in the spring and fall.

Fog occurs with greatest frequency during the winter and early spring. Most of the fog is of the advection type and results from warm moist tropical air overrunning the cold land surfaces.

Local smoke sources are of no great concern to aviation, due to the almost exclusive use of gas and electricity and the absence of heavy industry in the Austin area.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from November 1942-January 1946 and October 1946-May 1964; with the exception of cloud cover for which data are not available prior to 1946.

BERGSTROM AFB AUSTIN, TEXAS

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	60.2	65.1	71.5	79.3	86.4	92.6	95.9	96.5	90.1	81.8	70.1	62.6	78.9
Mean	50.2	54.8	60.6	68.9	76.4	82.7	85.5	85.6	79.8	70.9	59.5	52.3	68.5
Minimum	39.9	44.2	49.5	58.3	66.1	72.6	74.9	74.5	69.3	59.8	48.8	41.7	57.9

Record Temperature Extremes

Maximum	86	92	92	99	99	104	106	107	107	97	90	91
Minimum	-5	8	19	37	46	57	66	60	53	34	25	17
	Period of Record: 1942-1964											

MONTHLY MEANS

	Precipitation (Inches)												
Precipitation	1.71	2.36	1.72	2.78	2.93	3.20	1.34	1.58	3.69	2.98	1.78	2.00	28.07
Snowfall*	.4	.2	T	T	.0	.0	.0	.0	.0	.0	.0	.1	.7
(*Hail was included in Snowfall Period of Record: 1942-1964													
Summary prior to January 1956) Snowfall 1946-1964													

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	WNW	SW	SSW	SSE	NNW	WNW	NE	N	NNE	NNE	NNE	SSW
Velocity	63	51	63	41	62	69	42	57	55	44	43	55
Period of Record: 1946, 1948-1963												

Maximum and/or Minimum Anemometer Height: 101 feet 04/55; 10 feet 04/59

BERGSTROM AFB, AUSTIN, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY

FEBRUARY

Hours	Number of Observations	Distillates < 200 Pt and/or Stratocumulus < 1/2 MI	Distillates < 2000 Pt and/or Stratocumulus < 3 MI	Distillates < 4000 Pt and/or Stratocumulus < 7 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obscurements to Vision
00-02	2,001	4.4	34.5	39.4	43.7	0.3	11.3	1.0	0.7	0.0	12.9	12.7	1.1	0.0	0.0	13.6
03-05	2,008	7.6	35.2	43.6	39.4	0.3	14.1	1.4	0.6	0.0	16.0	17.4	0.3	0.0	0.0	16.8
06-08	2,046	7.2	34.5	46.6	34.7	1.1	13.0	1.6	0.6	0.0	15.1	21.0	0.9	0.0	0.0	14.7
09-11	2,041	3.4	36.0	44.3	27.5	1.1	12.3	1.1	0.9	0.0	14.2	17.4	1.0	0.0	0.0	14.4
12-14	2,041	0.5	26.1	38.6	30.0	0.1	10.3	0.5	0.9	0.0	11.6	11.5	0.7	0.0	0.0	12.5
15-17	2,044	0.5	20.6	31.9	35.4	0.0	8.7	0.6	0.8	0.0	9.9	9.8	0.3	0.0	0.0	10.3
18-20	2,030	1.7	19.5	29.8	39.5	0.0	9.1	0.9	0.4	0.0	10.4	10.0	0.3	0.0	0.0	10.5
21-23	2,000	8.5	25.1	34.1	42.6	0.3	10.0	0.9	0.4	0.0	11.2	10.6	0.3	0.0	0.0	11.2
All Hours	16,211	3.5	28.9	38.5	35.5	0.2	11.1	1.0	0.7	0.0	12.7	13.8	0.5	0.0	0.0	14.6

MARCH

APRIL

Hours	Number of Observations	Distillates < 200 Pt and/or Stratocumulus < 1/2 MI	Distillates < 2000 Pt and/or Stratocumulus < 3 MI	Distillates < 4000 Pt and/or Stratocumulus < 7 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obscurements to Vision
00-02	1,947	1.5	29.7	40.6	40.5	0.8	8.0	0.0	0.0	0.0	8.0	5.0	0.0	0.0	0.0	8.0
03-05	1,946	3.8	35.5	47.4	35.9	0.8	9.3	0.2	0.0	0.0	9.5	10.7	0.2	0.0	0.0	10.5
06-08	1,950	4.2	36.8	49.7	29.1	0.4	9.5	0.1	0.1	0.0	9.6	10.3	0.7	0.0	0.0	10.7
09-11	1,950	0.9	30.5	44.0	28.1	0.6	8.8	0.0	0.2	0.0	9.0	11.0	0.9	0.0	0.0	10.0
12-14	1,947	3.3	16.4	35.6	31.4	0.2	5.6	0.2	0.3	0.0	5.8	4.7	0.6	0.0	0.0	6.3
15-17	1,945	0.2	9.4	25.6	33.9	0.2	4.2	0.0	0.1	0.0	4.3	2.8	0.7	0.0	0.0	5.0
18-20	1,946	4.4	31.1	23.3	39.4	0.9	4.5	0.0	0.0	0.0	4.5	2.9	0.6	0.0	0.0	5.5
21-23	1,944	6.6	18.2	19.3	45.8	0.5	4.8	0.0	0.0	0.0	4.8	3.4	0.3	0.0	0.0	5.2
All Hours	15,375	1.5	23.1	36.7	39.5	0.5	6.8	0.0	0.1	0.0	6.9	7.5	0.5	0.0	0.0	9.8

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

--- indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

BERGSTROM AFB, AUSTIN, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY																
Hours	Number of Observations	Cellings >200 Ft and/or Visibility <3 M	Cellings <2000 Ft and/or Visibility <5 M	Cellings <4000 Ft and/or Visibility <6 M	Tdow Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,866	5	27.9	38.9	37.7	1.4	4.2	....	....	....	4.2	2.4	3	....	....	2.1
03-05	1,966	1.2	36.3	52.4	30.1	2.3	6.2	....	....	....	6.2	7.7	5	....	....	6.3
06-08	1,941	1.1	38.5	55.3	28.3	1.0	5.5	....	....	....	5.5	12.3	1.0	....	....	13.5
09-11	1,941	....	13.1	45.6	23.2	9	3.9	....	....	....	3.9	2.9	1.1	....	....	4
12-14	1,931	....	4.6	27.7	23.8	1.3	3.2	....	....	....	3.2	8	1.2	....	....	3
15-17	1,946	....	2.8	34.5	22.2	1.7	3.2	....	....	....	3.2	5	9	....	....	4
18-20	1,866	2	3.1	16.2	44.0	2.1	3.6	....	....	....	3.6	5	9	....	....	4
21-23	1,866	1	9.8	18.3	46.1	1.4	3.9	....	....	....	3.9	8	2	....	....	3
All Hours 15,167	4	17.9	32.7	34.5	1.5	4.2	....	....	....	....	4.2	3.4	8	....	....	4.4

JULY																
Hours	Number of Observations	Cellings >200 Ft and/or Visibility <1.75 M	Cellings <2000 Ft and/or Visibility <5 M	Cellings <4000 Ft and/or Visibility <6 M	Tdow Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,859	....	6.0	3.9	72.3	4	1.1	....	....	....	1.1	....	....	....	....	1
03-05	1,966	3	13.2	15.2	31.1	4	1.1	....	....	....	1.1	....	....	....	....	1.5
06-08	1,941	2	20.0	29.3	33.2	3	1.0	....	....	....	1.0	....	....	....	....	3.0
09-11	1,941	....	7.5	13.5	34.2	4	2.1	....	....	....	2.1	....	....	....	....	4
12-14	1,933	....	1.3	11.7	34.2	1.8	2.2	....	....	....	2.2	....	....	....	....	1
15-17	1,921	....	6	5.1	34.1	2.2	3.1	....	....	....	3.1	....	....	....	....	1
18-20	1,859	....	4	2.5	52.2	2.8	2.5	....	....	....	2.5	....	....	....	....	2
21-23	1,866	....	6	2.0	73.4	9	1.5	....	....	....	1.5	....	....	....	....	1
All Hours 15,153	1	6.5	12.6	48.1	4	2.0	....	....	....	....	2.0	6	3	....	....	9

AUGUST

Hours	Number of Observations	Cellings >200 Ft and/or Visibility <1.75 M	Cellings <2000 Ft and/or Visibility <5 M	Cellings <4000 Ft and/or Visibility <6 M	Tdow Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Date (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,866	1	4.6	7.7	74.5	6	1.3	....	....	....	1.3	....	....	....	....	5
03-05	1,860	3	12.5	15.1	67.3	1.0	2.1	....	....	....	2.1	....	....	....	....	1.3
06-08	1,936	6	19.9	23.7	55.2	4	3.1	....	....	....	3.1	....	....	....	....	4.9
09-11	1,938	....	8.3	26.7	43.9	2	2.3	....	....	....	2.3	....	....	....	....	3
12-14	1,938	....	2.0	9.5	37.6	1.0	2.0	....	....	....	2.0	....	....	....	....	2
15-17	1,921	....	1.0	4.5	37.1	1.8	2.5	....	....	....	2.5	....	....	....	....	....
18-20	1,860	....	9	8.5	54.5	1.5	2.1	....	....	....	2.1	....	....	....	....	....
21-23	1,866	....	9	8.2	76.1	4	1.3	....	....	....	1.3	....	....	....	....	....
All Hours 15,143	1	6.2	11.0	35.0	9	2.0	....	....	....	....	2.0	9	1	....	....	1.0

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

BERGSTROM AFB, AUSTIN, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER													OCTOBER												
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 Mi	Cellings <300 Ft and/or Visibility <3/4 Mi	Cellings <400 Ft and/or Visibility <5/8 Mi	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision									
00-00	1,799	3	14.2	17.1	64.3	1.1	4.6	....	....	....	4.6	1.3	....	....	....	1.3			
03-05	1,000	6	21.1	16.7	60.3	1.2	5.6	....	....	....	5.6	3.6	....	....	....	3.6			
06-08	1,000	1.8	27.1	33.9	46.5	9	5.7	....	....	....	5.7	12.1	....	....	....	13.6			
09-11	1,877	1	18.4	24.1	42.4	3	4.7	....	....	....	4.7	3.6	....	....	....	4.0			
12-14	1,869	1	5.8	10.7	36.4	9	4.3	....	....	....	4.3	1.3	....	....	....	1.4			
15-17	1,063	1	3.5	9.5	43.8	1.8	5.8	....	....	....	5.8	8	....	....	....	1.0			
18-20	1,797	....	2.7	5.8	57.8	1.3	4.5	....	....	....	4.5	5	....	....	....	7		
21-23	1,795	....	5.2	8.5	68.5	1.2	4.6	....	....	....	4.6	8	....	....	....	8		
All Hours	14,957	4	12.3	19.2	52.2	1.1	5.0	....	....	....	5.0	3.0	....	....	....	3.4			

NOVEMBER													DECEMBER												
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 Mi	Cellings <300 Ft and/or Visibility <3/4 Mi	Cellings <400 Ft and/or Visibility <5/8 Mi	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision									
00-02	1,939	1.2	23.4	31.8	40.9	4	7.7	....	....	....	7.7	6.8	....	....	....	7.5			
03-05	1,843	2.7	27.6	37.7	46.4	6	8.0	....	....	....	8.0	11.0	....	....	....	12.0			
06-08	2,501	3.5	29.6	43.1	40.0	3	8.6	....	....	....	8.7	17.6	....	....	....	19.8			
09-11	2,059	1.0	23.9	36.3	39.5	2	7.7	....	....	....	8.0	8.9	....	....	....	11.7			
12-14	2,044	3	13.8	30.4	42.9	4	6.9	....	....	....	7.0	4.6	....	....	....	5.8			
15-17	2,000	....	9.5	20.8	44.6	1	6.0	....	....	....	6.0	4.0	....	....	....	5.3		
18-20	1,963	1	9.6	17.4	51.5	3	6.3	....	....	....	6.3	4.1	....	....	....	5.4			
21-23	1,936	4	15.8	24.0	51.7	3	5.6	....	....	....	5.6	4.5	....	....	....	5.5			
All Hours	15,931	1.1	19.1	30.4	45.5	3	7.2	....	....	....	7.3	7.7	....	....	....	9.2			

ANNUAL																
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <1/2 Mi	Cellings <300 Ft and/or Visibility <3/4 Mi	Cellings <400 Ft and/or Visibility <5/8 Mi	Cloud Cover 3/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
All Hours	183,704	1.2	18.0	28.5	42.3	4	6.1	....	....	....	6.3	6.0	....	....	....	7.1

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 ... Indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

BERGSTROM AFB, AUSTIN, TEXAS

WIND ROSES

MAY

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	.7	1.3	1.6	1.4	.5	5.6	9.5
NE	1.6	.9	1.2	1.5	1.1	3.3	7.4
E	1.3	1.6	1.0	1.2	1.0	1.9	7.0
ENE	.6	1.0	1.1	1.1	.7	3.3	8.2
ESE	.8	1.0	1.1	1.1	.7	3.3	8.2
S	.8	1.7	3.0	2.3	1.0	9.1	10.2
SSE	1.8	3.1	7.8	6.0	1.9	22.9	10.6
SW	1.6	1.0	2.3	2.1	1.6	6.8	10.4
WSW	1.2	.6	.9	.9	.0	2.6	6.2
W	.3	.2	1.1	1.1	.0	.8	6.0
WNW	.3	.2	1.1	1.1	.0	1.1	7.3
NW	.4	.3	.9	.8	.0	1.1	7.3
NWN	.4	.3	.9	.8	.0	1.1	7.3
VARBL						9.9	
CALM						100.0	9.0
TOT	16.1	16.3	30.2	29.3	8.1	136.0	135.7
TOTAL NUMBER OF OBSERVATIONS						1361	

JUNE

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	.6	.8	.8	.4	.0	2.7	6.8
NE	.4	.8	.8	.3	.0	2.3	6.4
E	.5	.7	.8	.2	.0	2.1	6.7
ENE	.7	.8	.8	.2	.0	3.0	7.6
ESE	.7	.8	1.2	.4	.1	3.0	7.6
S	.9	1.6	2.7	1.8	.7	8.0	9.4
SSE	1.4	4.0	6.6	6.5	1.0	22.1	10.3
SW	.7	1.9	3.7	3.3	1.0	10.9	10.5
WSW	.3	.4	.4	.3	.1	1.8	7.6
W	.2	.2	.2	.2	.0	.6	5.4
WNW	.2	.2	.2	.2	.0	.6	5.4
NW	.2	.2	.2	.2	.0	.6	5.4
NWN	.2	.2	.2	.2	.0	.6	5.4
VARBL						1.0	7.0
CALM						9.3	
TOT	18.3	17.2	30.1	24.4	8.1	160.0	8.9
TOTAL NUMBER OF OBSERVATIONS						1663	

JULY

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	.4	.5	.4	.2	.0	1.4	6.3
NE	1.4	.4	.6	.3	.1	2.0	7.9
E	1.6	.7	.9	.2	.0	2.4	6.5
ENE	.7	1.0	1.7	.4	.0	4.6	6.7
ESE	.8	1.5	2.1	1.5	.5	6.8	8.9
S	1.8	2.9	16.1	6.1	1.7	24.2	10.3
SSE	1.8	2.9	16.1	6.1	1.7	24.2	10.3
SW	.9	2.6	16.1	4.6	1.0	15.3	9.9
WSW	.4	1.4	2.2	1.2	.0	5.6	6.2
W	.3	.3	.2	.0	.0	1.8	5.2
WNW	.2	.1	.2	.0	.0	.6	5.9
NW	.2	.1	.2	.0	.0	.6	5.9
NWN	.2	.1	.2	.0	.0	.6	5.9
VARBL						2.7	4.9
CALM						8.5	
TOT	18.3	19.4	33.3	23.1	5.4	100.0	8.3
TOTAL NUMBER OF OBSERVATIONS						1311	

AUGUST

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	.8	1.0	1.1	.3	.0	3.2	6.8
NE	.4	.8	1.3	.6	.1	3.2	8.1
E	.6	.7	1.0	.4	.0	2.8	7.1
ENE	.6	.7	1.0	.4	.0	2.8	7.1
ESE	1.0	1.6	1.4	.3	.0	4.3	6.0
S	1.3	1.8	2.8	1.1	.0	7.2	7.8
SSE	1.3	1.8	2.8	1.1	.0	7.2	7.8
SW	1.5	2.7	5.1	3.3	.2	13.8	9.3
WSW	1.1	2.5	5.8	4.0	.2	14.3	9.6
W	.8	1.2	2.3	1.1	.2	5.6	8.3
WNW	.3	.3	.3	.1	.0	1.0	5.8
NW	.2	.2	.2	.1	.0	.6	6.4
NWN	.2	.2	.2	.1	.0	.6	6.4
VARBL						1.4	7.7
CALM						10.3	
TOT	21.1	21.0	33.8	18.1	3.4	100.0	7.5
TOTAL NUMBER OF OBSERVATIONS						1314	

BIGGS AFB EL PASO, TEXAS

(Lat. 31°50'N, Long. 106°24'W, Elev. 3961 ft.)

Biggs AFB is located five miles northeast of the city of El Paso and 10 miles north of the Rio Grande River. The Franklin Mountains lie 10 miles to the west, the Juarez Mountains 15 miles to the southwest, and the Hueco Mountains 25 miles to the east. All have peaks near 7,000 feet in elevation.

The mean annual precipitation is less than eight inches, and the climate is quite dry throughout the year. More than half of the precipitation occurs in the summer from brief but sometimes heavy thunderstorms.

With dry loose soils and sparse vegetation any wind in excess of 25 miles per hour will generally lower surface visibilities in blowing dust or sand. In cases of prolonged high surface winds reduced visibilities may be encountered to altitudes as high as 12,000 feet above ground. Short periods of blowing dust may also occur with the outflow of air ahead of well developed thunderstorms.

Low ceilings and visibilities occur most often during the winter months, December through March, and are most often associated with cold fronts which generally pass the station from the northeast and become stationary as they approach the mountains to the west.

Some industrial smoke from El Paso and Juarez occasionally reduce surface visibilities at Biggs AFB but generally not below six or seven miles. However resulting haze layers may reduce visibilities aloft, and during such conditions pilots have reported difficulty in visually locating the field.

BIGGS AFB (Cont'd.)

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from April 1941-June 1945, September 1946-March 1947, February 1948-January 1959 and July 1959-December 1964; with the exception of cloud cover for which data are not available prior to 1946.

BIGGS AFB EL PASO, TEXAS

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	56.4	62.0	67.7	77.0	86.1	94.5	93.8	92.3	87.4	77.9	65.2	57.6	76.3
Mean	44.4	49.2	55.0	64.0	72.8	81.5	82.4	81.0	75.6	65.3	52.0	45.4	63.9
Minimum	32.0	36.1	42.2	50.8	59.4	68.3	70.8	69.5	63.6	52.6	38.6	33.0	51.3

Record Temperature Extremes

Maximum	76	80	89	96	106	107	107	105	103	93	83	75
Minimum	-9	9	19	26	38	51	60	59	46	34	17	5

Period of Record: 1941-1964

MONTHLY MEANS

MONTHLY MEANS	Precipitation (Inches)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Precipitation	.42	.42	.26	.27	.29	.50	1.62	1.35	1.22	.74	.27	.48	7.83
Snowfall*	1.2	1.0	.5	T	T	.0	.0	.0	.0	T	.5	1.2	4.3

(*Hail was included in Snowfall Summary prior to January 1956)

Period of Record: Precipitation 1941-1964
Snowfall 1946-1964

Surface Winds (Knots) - Record Peak Gusts

Wind Direction Velocity	Surface Winds (Knots)								Record Peak Gusts			
	WSW	W	WSW	W	WSW	SE	N	N	W	WSW	W	
	71	70	56	67	55	49	49	43	39	47	48	56

Period of Record: 1946-1963

Maximum and/or Minimum Anemometer Height: 50 feet 04/53; 13 feet 05/55

BIGGS AFB, EL PASO, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY

FEBRUARY

Hours	Number of Observations	Cellings <200 Ft and/or Visibility <3 Mi	Cellings <400 Ft and/or Visibility <5 Mi	Cloud Cover 1/10	Thunder (Light or Heavy) Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of
00-02	1,990	.3	2.2	4.9	65.0	2.0	.2	1.5	3.7	.8	.4	.2	.5	1.8
03-05	1,990	.7	3.1	5.8	64.3	2.3	.1	1.8	4.2	1.0	.4	.2	.4	1.7
06-08	1,949	1.4	4.3	7.4	53.6	2.8	.1	1.9	4.7	2.4	.4	.3	.7	3.7
09-11	1,990	.5	3.8	7.5	48.2	2.2	2.2	1.2	3.4	1.76	1.9	.3	1.1	4.8
12-14	1,991	.1	3.5	8.3	44.9	2.4	2.4	1.2	3.6	.7	1.5	.2	1.9	4.3
15-17	1,993	.3	3.3	7.1	43.7	1.1	2.6	.8	3.4	.3	.9	.2	2.3	3.6
18-20	1,991	.2	2.7	5.9	52.0	2.5	2.5	.7	3.2	.3	.2	.2	1.4	2.1
21-23	1,992	.2	2.3	4.7	61.0	2.1	.1	1.2	3.3	.4	.1	.2	.9	1.5
All Hours	15,666	.5	3.1	6.5	54.1	.0	2.4	.1	3.3	1.0	.7	.2	1.1	2.9

Hours	Number of Observations	Cellings <200 Ft and/or Visibility <3 Mi	Cellings <400 Ft and/or Visibility <5 Mi	Cloud Cover 1/10	Thunder (Light or Heavy) Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of
00-02	1,777	.3	2.0	3.6	70.9	1.6	1.6	1.0	3.0	.2	.1	.1	.2	1.5
03-05	1,778	.4	1.8	3.8	70.9	1.9	1.9	1.1	3.0	.1	.3	.1	.3	1.0
06-08	1,778	.4	1.9	3.1	58.0	2.0	2.0	.7	2.7	.5	.6	.1	.9	2.1
09-11	1,776	.3	1.5	3.2	54.7	2.0	2.0	.9	2.8	.2	.6	.1	1.7	2.6
12-14	1,779	.6	3.3	7.5	50.3	1.1	2.0	.7	2.7	.2	.4	.2	4.6	5.3
15-17	1,778	.7	3.5	7.5	47.2	1.1	1.4	.7	2.1	.1	.1	.1	2.8	6.0
18-20	1,777	.2	2.1	4.6	57.6	1.7	1.7	.6	2.4	2.4	.2	.2	3.4	3.9
21-23	1,778	.2	1.6	3.7	67.5	2.0	2.0	1.0	2.9	.2	.2	.1	1.7	1.9
All Hours	14,921	.4	2.2	5.1	59.6	.0	1.8	.8	2.7	.2	.3	.1	2.5	3.0

MARCH

APRIL

Hours	Number of Observations	Cellings <200 Ft and/or Visibility <3 Mi	Cellings <400 Ft and/or Visibility <5 Mi	Cloud Cover 1/10	Thunder (Light or Heavy) Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of
00-02	1,993	.4	1.1	2.9	64.1	1.8	.1	.5	2.4	2.4	.4	.2	.2	2.0
03-05	1,993	.1	1.1	2.8	64.2	1.2	1.9	.6	1.1	2.4	.2	.3	.4	1.5
06-08	1,998	.3	1.4	4.2	51.3	1.1	1.8	.7	2.5	.4	.3	.3	.5	2.2
09-11	1,990	.3	2.9	7.0	48.7	1.1	1.4	.5	1.8	.3	.6	.4	.4	5.3
12-14	1,998	1.1	4.3	8.6	44.1	1.1	1.5	.4	1.8	.1	.2	.7	7.6	7.8
15-17	1,998	1.6	5.7	9.6	44.6	1.1	1.8	.1	1.9	2.4	.1	.1	9.3	9.3
18-20	1,991	.9	3.3	6.9	51.9	1.1	1.7	.2	1.9	1.1	.1	.1	6.6	6.7
21-23	1,992	.5	2.0	3.5	63.2	1.1	1.6	.2	1.8	1.8	.1	.1	3.6	3.7
All Hours	15,615	.6	2.7	5.7	54.0	.1	1.7	.4	2.1	.1	.2	.4	4.5	4.8

Hours	Number of Observations	Cellings <200 Ft and/or Visibility <3 Mi	Cellings <400 Ft and/or Visibility <5 Mi	Cloud Cover 1/10	Thunder (Light or Heavy) Precipitation	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of
00-02	1,888	.2	1.0	2.3	75.4	1.2	1.2	.1	1.2	1.2	.2	.1	.2	1.8
03-05	1,889	.1	.5	2.3	75.5	1.1	1.2	.1	1.2	.2	.6	.1	.2	1.3
06-08	1,889	.1	.8	4.0	60.1	1.1	1.2	.1	1.2	.2	.6	.1	.2	1.5
09-11	1,887	.1	1.1	4.2	59.9	1.1	1.5	.1	1.5	1.5	1.0	.2	.2	2.9
12-14	1,886	.7	2.3	5.9	53.0	1.2	1.3	.1	1.3	1.3	.2	.2	5.5	5.7
15-17	1,885	1.0	4.0	8.2	49.4	.5	.9	.1	.9	.9	.1	.1	8.5	8.5
18-20	1,889	.5	3.1	6.7	57.7	.3	.9	.1	.9	.9	.1	.1	7.3	7.3
21-23	1,888	.2	1.3	3.4	69.9	1.2	1.3	.1	1.3	1.3	.2	.1	3.4	3.4
All Hours	15,101	.4	1.7	4.6	62.1	.2	1.2	.0	1.2	.0	.5	.1	4.0	4.3

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

BIGGS AFB, EL PASO, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

JUNE																
Hours	Number of Observations	Wettable <200 Ft and/or Wettable <1/2 MI	Wettable <2000 Ft and/or Wettable <3 MI	Wettable <4000 Ft and/or Wettable <6 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,953	...	...	...	76.1	5.7	...	...	...	...	7.7	...	...	...	7.7	1.0
03-05	1,952	...	...	...	75.0	1.1	...	...	...	...	6.6	...	...	...	3.4	1.0
06-08	1,954	...	...	...	65.2	2.7	...	...	...	...	7.7	...	...	...	1.0	1.0
09-11	1,952	...	...	...	65.0	1.2	...	...	...	...	7.7	...	...	...	1.0	1.0
12-14	1,953	...	...	...	66.8	4.7	...	...	...	...	7.7	...	...	...	1.0	1.0
15-17	1,953	...	...	...	50.4	8.1	...	...	...	...	7.7	...	...	...	1.0	1.0
18-20	1,953	...	...	...	58.0	1.0	...	...	...	...	7.7	...	...	...	1.0	1.0
21-23	1,953	...	...	...	73.0	6.1	...	...	...	...	7.7	...	...	...	1.0	1.0
All Hours 15,621	...	...	...	...	64.6	5.8	...	...	...	...	7.7	...	...	...	1.0	1.0

JULY																
Hours	Number of Observations	Wettable <200 Ft and/or Wettable <1/2 MI	Wettable <2000 Ft and/or Wettable <3 MI	Wettable <4000 Ft and/or Wettable <6 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,953	...	...	...	49.7	3.8	...	...	...	...	5.5	...	...	...	4.4	1.0
03-05	1,952	...	...	...	49.6	6.3	...	...	...	...	5.5	...	...	...	1.1	1.0
06-08	1,951	...	...	...	46.1	1.1	...	...	...	...	5.5	...	...	...	1.1	1.0
09-11	1,950	...	...	...	50.7	2.1	...	...	...	...	5.5	...	...	...	1.1	1.0
12-14	1,951	...	...	...	36.4	2.1	...	...	...	...	5.5	...	...	...	1.1	1.0
15-17	1,949	...	...	...	25.5	4.6	...	...	...	...	5.5	...	...	...	1.1	1.0
18-20	1,950	...	...	...	28.6	4.6	...	...	...	...	5.5	...	...	...	1.1	1.0
21-23	1,950	...	...	...	44.2	3.6	...	...	...	...	5.5	...	...	...	1.1	1.0
All Hours 15,626	...	...	...	...	41.4	2.2	...	...	...	...	5.5	...	...	...	1.1	1.0

AUGUST																
Hours	Number of Observations	Wettable <200 Ft and/or Wettable <1/2 MI	Wettable <2000 Ft and/or Wettable <3 MI	Wettable <4000 Ft and/or Wettable <6 MI	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,953	...	...	...	54.2	2.7	...	...	...	...	5.3	...	...	...	4.4	1.0
03-05	1,952	...	...	...	57.4	9.3	...	...	...	...	5.3	...	...	...	1.1	1.0
06-08	1,953	...	...	...	51.6	3.2	...	...	...	...	5.3	...	...	...	1.1	1.0
09-11	1,952	...	...	...	59.6	1.1	...	...	...	...	5.3	...	...	...	1.1	1.0
12-14	1,952	...	...	...	43.4	1.1	...	...	...	...	5.3	...	...	...	1.1	1.0
15-17	1,953	...	...	...	31.0	4.4	...	...	...	...	5.3	...	...	...	1.1	1.0
18-20	1,953	...	...	...	34.5	3.7	...	...	...	...	5.3	...	...	...	1.1	1.0
21-23	1,951	...	...	...	47.9	3.1	...	...	...	...	5.3	...	...	...	1.1	1.0
All Hours 15,619	...	...	...	...	47.5	2.0	...	...	...	...	5.3	...	...	...	1.1	1.0

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

BIGGS AFB, EL PASO, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER

Hours	Number of Observations	Occurrences of Dewfall - 1/2 MI	Occurrences of Dewfall - 1/4 MI	Occurrences of Dewfall - 1/8 MI	Fog	Smoke and/or haze	Blowing snow	Part (Blowing and/or Suspended)	Restrictions to Vision	Hours	Number of Observations	Occurrences of Dewfall - 1/2 MI	Occurrences of Dewfall - 1/4 MI	Occurrences of Dewfall - 1/8 MI	Fog	Smoke and/or haze	Blowing snow	Part (Blowing and/or Suspended)	Restrictions to Vision
00-02	1,980	5	3.0	69.1	0	4.1	1.1	1.1	3.4	00-02	2,043	1	1.2	3.3	77.6	1	3.1	1.1	3.1
03-05	1,980	1	0.8	3.5	69.4	3.1	1.1	1.1	2.8	03-05	2,042	3	1.5	4.8	76.9	2	2.8	1.1	2.8
06-08	1,974	3	1.4	5.1	63.9	2.8	1.6	1.2	2.9	06-08	2,041	4	1.6	5.4	66.7	0	1.6	1.0	1.6
09-11	1,979	1	1.1	4.3	66.3	2.0	1.3	1.4	3.9	09-11	2,042	9	4.2	64.3	1	1.8	1.8	1.8	1.8
12-14	1,979	6	3.1	60.7	3	1.9	1.4	1.3	3.7	12-14	2,044	1	1.7	4.1	60.7	2	2.0	2.0	2.0
15-17	1,978	4	2.1	58.9	3.9	2.8	1.1	1.1	3.3	15-17	2,044	2	1.7	3.3	59.8	5	2.7	2.7	2.7
18-20	1,978	1	1.2	1.7	63.4	3.4	3.7	1.1	2.4	18-20	2,041	4	2.2	66.9	4	2.4	2.4	2.4	2.4
21-23	1,974	4	2.4	67.0	1.4	3.9	1.1	1.1	3.3	21-23	2,041	8	1.9	73.0	3	3.0	1.1	3.0	
All Hours 19,822	1	6	3.2	64.6	0	3.0	1.1	1.1	2.5	All Hours 16,338	2	1.0	3.6	68.4	3	2.4	1.1	2.4	

OCTOBER

Hours	Number of Observations	Occurrences of Dewfall - 1/2 MI	Occurrences of Dewfall - 1/4 MI	Occurrences of Dewfall - 1/8 MI	Fog	Smoke and/or haze	Blowing snow	Part (Blowing and/or Suspended)	Restrictions to Vision
00-02	1,980	5	3.0	69.1	0	4.1	1.1	1.1	3.4
03-05	1,980	1	0.8	3.5	69.4	3.1	1.1	1.1	2.8
06-08	1,974	3	1.4	5.1	63.9	2.8	1.6	1.2	2.9
09-11	1,979	1	1.1	4.3	66.3	2.0	1.3	1.4	3.9
12-14	1,979	6	3.1	60.7	3	1.9	1.4	1.3	3.7
15-17	1,978	4	2.1	58.9	3.9	2.8	1.1	1.1	3.3
18-20	1,978	1	1.2	1.7	63.4	3.4	3.7	1.1	2.4
21-23	1,974	4	2.4	67.0	1.4	3.9	1.1	1.1	3.3
All Hours 16,338	2	1.0	3.6	68.4	3	2.4	1.1	1.1	2.5

NOVEMBER

Hours	Number of Observations	Occurrences of Dewfall - 1/2 MI	Occurrences of Dewfall - 1/4 MI	Occurrences of Dewfall - 1/8 MI	Fog	Smoke and/or haze	Blowing snow	Part (Blowing and/or Suspended)	Restrictions to Vision
00-02	1,979	2	1.1	4.2	76.5	1	1.1	1.1	5.9
03-05	1,979	4	1.9	4.3	75.1	1.1	1.1	1.1	2.1
06-08	1,977	5	2.1	4.5	66.3	1.5	1.9	1.1	1.0
09-11	1,980	3	1.7	4.8	63.7	1.6	1.0	1.6	1.9
12-14	1,979	2	1.6	4.9	68.8	1.7	1.3	1.6	2.1
15-17	1,978	3	1.9	5.3	68.4	1.1	1.2	1.5	3.2
18-20	1,980	2	1.3	3.7	71.1	1	1.2	1.1	1.4
21-23	1,979	2	1.3	3.7	75.0	1	1.3	1.1	1.8
All Hours 15,831	3	1.5	4.4	69.1	0	1.3	1.1	1.1	1.6

DECEMBER

Hours	Number of Observations	Occurrences of Dewfall - 1/2 MI	Occurrences of Dewfall - 1/4 MI	Occurrences of Dewfall - 1/8 MI	Fog	Smoke and/or haze	Blowing snow	Part (Blowing and/or Suspended)	Restrictions to Vision
00-02	2,044	8	2.9	5.3	70.6	0	1.9	1.1	1.8
03-05	2,041	8	3.4	5.6	70.4	0	2.4	1.3	1.3
06-08	2,045	7	3.6	6.8	59.9	0	2.2	1.2	1.7
09-11	2,044	6	3.9	7.5	55.5	0	1.7	1.3	1.3
12-14	2,046	3	4.3	8.0	54.0	0	1.6	1.0	1.6
15-17	2,043	3	3.7	7.0	52.4	0	2.1	1.1	1.5
18-20	2,044	2	2.3	5.5	63.9	0	1.9	1.9	1.9
21-23	2,045	4	2.5	5.1	67.9	0	1.9	1.9	1.9
All Hours 16,352	5	3.1	6.1	62.8	0	1.9	1.1	1.8	2.8

ANNUAL

Hours	Number of Observations	Occurrences of Dewfall - 1/2 MI	Occurrences of Dewfall - 1/4 MI	Occurrences of Dewfall - 1/8 MI	Fog	Smoke and/or haze	Blowing snow	Part (Blowing and/or Suspended)	Restrictions to Vision
00-02	1,979	2	1.1	4.2	76.5	1	1.1	1.1	5.9
03-05	1,979	4	1.9	4.3	75.1	1.1	1.1	1.1	2.1
06-08	1,977	5	2.1	4.5	66.3	1.5	1.9	1.1	1.0
09-11	1,980	3	1.7	4.8	63.7	1.6	1.0	1.6	1.9
12-14	1,979	2	1.6	4.9	68.8	1.7	1.3	1.6	2.1
15-17	1,978	3	1.9	5.3	68.4	1	1.2	1.5	3.2
18-20	1,980	2	1.3	3.7	71.1	1	1.2	1.1	1.4
21-23	1,979	2	1.3	3.7	75.0	1	1.3	1.1	1.8
All Hours 15,831	3	1.5	4.4	69.1	0	1.3	1.1	1.1	1.6

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

--- indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

BIGGS AFB, EL PASO, TEXAS WIND ROSES

JANUARY

Dir.	Speed in Knots					Total	Mean Wind Speed		
	0-3	4-6	7-10	11-16	17-21				
N	2.5	3.9	4.1	1.0	.2	11.7	6.6		
NNE	1.4	2.3	2.0	.4	.1	6.2	6.2		
NW	1.6	2.8	1.4	.1	.0	5.9	2.1		
E	1.0	1.3	.9	.3	.1	3.6	6.1		
ESE	1.0	1.3	.7	.1	.0	3.1	5.2		
SSE	1.6	1.1	1.6	.1	.0	4.4	5.4		
SSW	1.4	1.1	1.1	.1	.0	4.0	6.6		
SW	.9	1.6	1.7	.8	.3	5.4	8.2		
WSW	.3	1.1	2.2	1.7	.8	6.7	11.0		
W	.2	.5	1.0	1.0	.5	3.6	11.8		
WNW	.6	.9	.9	.4	.1	3.3	7.1		
WV	.6	.9	.9	.4	.1	3.3	7.1		
VA	29.0					29.0			
TOT	42.7	22.7	21.4	8.6	3.1	1.2	.2	100.0	1564
								TOTAL NUMBER OF OBSERVATIONS	1564

FEBRUARY

Dir.	Speed in Knots					Total	Mean Wind Speed		
	0-3	4-6	7-10	11-16	17-21				
N	1.6	8.9	3.7	1.1	.1	9.4	7.1		
NNE	1.2	1.9	1.8	.5	.1	5.2	6.6		
NW	1.6	1.8	1.4	.2	.0	4.0	6.1		
E	.9	1.3	1.1	.6	.1	4.0	7.0		
ESE	1.4	1.5	.7	.0	.0	3.6	4.6		
SSE	1.8	1.2	.9	.1	.0	3.0	3.4		
SSW	1.7	1.1	1.2	.3	.1	3.4	7.0		
SW	1.2	1.4	2.1	.8	.3	6.0	8.2		
WSW	.6	1.0	2.1	2.9	1.1	9.3	11.8		
W	.3	.8	1.4	1.4	.6	4.7	12.5		
WNW	.7	1.0	1.0	.6	.1	3.3	7.7		
WV	.7	1.0	1.0	.6	.1	3.3	7.7		
VA	22.8					22.8			
TOT	37.3	21.1	21.4	12.0	3.8	2.0	.4	100.0	1491
								TOTAL NUMBER OF OBSERVATIONS	1491

MARCH

Dir.	Speed in Knots					Total	Mean Wind Speed		
	0-3	4-6	7-10	11-16	17-21				
N	1.2	2.0	2.9	.9	.2	7.2	7.4		
NNE	.7	1.2	1.0	.4	.1	3.4	6.8		
NW	.9	1.6	.5	.2	.1	3.1	6.3		
E	.6	1.1	1.0	.4	.1	3.2	7.1		
ESE	.7	1.3	.9	.2	.0	3.3	5.9		
SSE	.7	1.1	.8	.1	.0	2.7	5.6		
SSW	1.5	1.2	1.4	.4	.1	3.6	7.8		
SW	.8	1.4	2.3	1.7	.6	7.2	9.9		
WSW	.2	1.2	2.0	2.2	1.1	6.7	12.2		
W	.2	.6	2.1	2.4	1.2	7.1	13.0		
WNW	.4	.6	1.2	.7	.0	3.1	8.0		
WV	.4	.6	1.2	.7	.0	3.1	8.0		
VA	18.7					18.7			
TOT	28.5	18.4	25.1	17.3	7.1	3.0	.5	100.0	1566
								TOTAL NUMBER OF OBSERVATIONS	1566

APRIL

Dir.	Speed in Knots					Total	Mean Wind Speed		
	0-3	4-6	7-10	11-16	17-21				
N	.9	1.4	1.9	.7	.1	5.1	7.5		
NNE	.5	.9	1.0	.4	.0	2.9	7.1		
NW	.7	.8	.4	.3	.1	2.4	2.9		
E	.8	1.1	1.4	.8	.2	4.2	8.0		
ESE	1.0	1.4	1.3	.5	.1	4.3	6.8		
SSE	1.5	1.2	1.1	.3	.0	3.3	6.7		
SSW	1.4	.9	1.4	.6	.0	3.4	7.3		
SW	.9	1.4	2.3	1.7	.5	7.8	9.4		
WSW	.9	1.4	2.6	1.6	.2	13.7	12.2		
W	.3	.7	2.0	2.0	.9	6.4	12.7		
WNW	.3	.7	1.8	.9	.1	3.4	8.4		
WV	.3	.7	1.8	.9	.1	3.4	8.4		
VA	17.1					17.1			
TOT	26.8	16.8	27.2	19.0	6.7	2.9	.5	100.0	1597
								TOTAL NUMBER OF OBSERVATIONS	1597

CARSWELL AFB FORT WORTH, TEXAS (Lat. 32°46'N, Long. 97°27'W, Elev. 617 ft.)

Carswell AFB is located in the Grand Prairie region of northeast Texas in an area characterized by numerous low eroded cliffs and dissected plains which are traversed by many small streams and rivers. The city of Fort Worth lies immediately east of the airfield.

Weather conditions related to aviation show a marked change from summer to winter in the Fort Worth Area. The centers of most cyclones and anticyclones pass to the north; however, fronts do pass over the station and as a result poor flying conditions occur most often during the winter.

Low ceilings and visibilities during the winter are brought about not only by frontal activity, but also by the occurrence of low stratus and fog. Such conditions occur when winds at the surface shift to a southeasterly direction pulling the warm moist Gulf air over the cool land surface.

Thunderstorm frequency is greatest in May, but they may occur in all months of the year. During late spring most thunderstorms occur during the hours around midnight.

Smoke is present throughout the year with the highest concentration occurring during the fall and winter when surface inversions are most frequent.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from November 1942-October 1945 and September 1946-March 1965; with the exception of cloud cover for which data are not available prior to 1946.

CARSWELL AFB FORT WORTH, TEXAS

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	55.4	60.6	66.9	76.4	83.8	91.9	95.8	96.5	88.8	79.3	66.4	58.2	76.8
Mean	45.3	50.3	56.4	66.1	74.0	82.0	85.7	85.9	78.5	68.7	55.9	48.4	66.6
Minimum	35.1	39.9	45.5	55.5	63.9	71.8	75.3	75.1	67.9	57.8	45.2	38.3	56.1

Record Temperature Extremes

Maximum	88	88	95	99	100	106	109	110	107	105	89	91
Minimum	2	5	11	31	42	55	63	61	52	34	18	11
	Period of Record: 1942-1964											

MONTHLY MEANS

Precipitation (Inches)

Precipitation	1.80	2.08	2.12	3.69	4.51	3.13	2.06	1.88	3.26	2.61	1.83	2.10	31.06
Snowfall*	2.1	.8	.6	T	T	.0	T	T	.0	T	.4	T	3.9
	(*Hail was included in Snowfall Period of Record: Precipitation 1942-1964 Snowfall 1946-1964)												

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	NW	SW	W	WSW	SW	NW	N	SSW	NE	NW	N	S
Velocity	45	49	69	64	68	55	47	54	59	45	45	53
	Period of Record: 1947, 1949-1964											

Maximum and/or Minimum Anemometer Height: 65 feet 06/53; 12 feet 04/57

CARSWELL AFB, FORT WORTH, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY												FEBRUARY																					
Hours	Number of Observations	Clearings <200 Ft and/or Visibility <1 MI	Clearings <400 Ft and/or Visibility <3 MI	Clearings <800 Ft and/or Visibility <5 MI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Data (Blowing and/or Suspended)	Obstructions to Vision	Hours	Number of Observations	Clearings <200 Ft and/or Visibility <1 MI	Clearings <400 Ft and/or Visibility <3 MI	Clearings <800 Ft and/or Visibility <5 MI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Data (Blowing and/or Suspended)	Obstructions to Vision												
00-02	2,046	2.1	20.6	29.1	48.9	.2	7.4	2.3	1.1	1.1	10.5	12.9	2.2	4.3	15.2	4	15.2	00-02	1,866	1.9	20.2	31.2	49.5	.7	6.3	.5	.9	1.1	9.6	13.5	3.4	1.7	18.3
03-05	2,046	3.5	23.2	32.9	47.0	.2	7.7	2.4	1.9	1.1	11.7	15.2	2.2	4.3	17.2	0	17.2	03-05	1,866	3.3	26.2	34.5	46.5	1.1	9.9	.6	1.2	1.1	11.5	15.8	3.2	1.3	19.8
06-08	2,045	3.1	26.5	35.3	39.0	.1	7.5	1.9	1.9	1.1	11.1	17.6	4.8	4.8	22.1	66-08	1,865	3.2	27.7	37.7	39.4	.3	10.2	.5	.7	1.1	11.4	18.9	5.6	1.3	24.6		
09-11	2,046	1.2	25.1	35.9	35.0	.2	6.6	1.6	1.9	1.1	10.0	15.6	1.5	1.1	22.5	09-11	1,866	1.8	27.1	37.7	37.1	.4	9.2	.5	1.1	1.1	10.6	16.9	8.0	1.4	25.0		
12-14	2,046	.3	19.8	28.6	34.5	.1	6.5	1.3	1.6	1.1	9.3	10.4	4.2	1.1	14.7	12-14	1,866	.3	20.5	31.9	22.5	.2	7.5	.6	1.1	1.1	9.1	10.2	5.6	1.2	16.6		
15-17	2,045	.2	15.7	24.9	36.1	.0	5.4	1.5	1.8	1.1	6.6	8.3	4.0	1.1	12.9	15-17	1,866	.5	16.4	26.7	37.0	.3	7.4	.7	1.2	1.1	9.0	8.6	4.3	1.7	24.5		
18-20	2,043	.5	14.5	22.5	43.9	5.2	1.5	1.3	1.3	1.1	7.3	6.6	3.2	1.1	12.1	18-20	1,866	.2	14.9	26.0	41.7	.5	6.4	.7	1.1	1.1	8.1	8.7	4.4	1.9	15.0		
21-23	2,046	1.2	17.7	24.4	43.3	1.1	6.7	1.5	.7	1.1	9.0	9.3	2.6	1.1	11.9	21-23	1,865	1.3	15.2	25.2	50.5	.6	6.9	.5	1.1	1.1	8.4	9.6	3.1	1.4	13.9		
All Hours	16,363	1.5	20.4	29.2	41.3	1.1	6.6	1.8	1.5	1.1	9.8	12.2	3.6	.0	13.1	All Hours	14,966	1.6	21.0	31.6	42.6	.5	8.2	.6	1.0	.0	9.7	12.8	4.7	1.5	18.5		

MARCH												APRIL																			
Hours	Number of Observations	Clearings <200 Ft and/or Visibility <1 MI	Clearings <400 Ft and/or Visibility <3 MI	Clearings <800 Ft and/or Visibility <5 MI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Data (Blowing and/or Suspended)	Obstructions to Vision	Hours	Number of Observations	Clearings <200 Ft and/or Visibility <1 MI	Clearings <400 Ft and/or Visibility <3 MI	Clearings <800 Ft and/or Visibility <5 MI	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Data (Blowing and/or Suspended)	Obstructions to Vision										
00-02	2,046	1.0	15.7	26.7	51.1	1.1	6.0	2.2	1.1	1.1	6.2	6.2	2.8	1.1	10.8	00-02	1,890	.4	12.3	24.4	46.8	1.9	6.0	.2	1.1	6.2	5.0	1.8	2.1	8.6	
03-05	2,044	1.4	18.6	31.7	47.3	.7	7.2	1.1	1.4	1.1	5.3	8.5	2.6	1.1	12.4	03-05	1,890	.6	18.6	32.3	41.2	1.8	6.2	.1	1.1	6.3	7.6	2.9	1.1	10.8	
06-08	2,046	1.3	24.4	30.1	35.5	.7	7.4	3.3	.5	1.1	6.2	12.7	6.0	1.1	19.7	06-08	1,890	.3	24.0	35.0	31.1	1.1	7.2	1.1	1.1	7.2	12.5	5.6	1.1	12.8	
09-11	2,046	.4	22.2	34.5	36.1	.4	6.6	1.4	.5	1.1	7.5	9.7	6.5	1.1	17.4	09-11	1,890	.1	21.1	36.6	31.7	1.1	6.1	1.1	1.1	6.1	6.2	5.4	1.1	12.6	
12-14	2,045	.2	13.0	25.0	38.6	.4	5.8	2.2	.4	1.1	6.4	5.5	3.9	1.1	10.2	12-14	1,890	.1	11.6	30.2	31.6	1.6	6.7	1.1	1.1	6.7	2.8	3.8	1.4	7.9	
15-17	2,045	.3	10.3	21.7	38.6	.7	5.4	1.1	.3	1.1	5.8	5.4	2.5	1.1	9.4	15-17	1,890	.1	4.6	21.4	31.5	2.0	6.5	1.1	1.1	6.5	2.6	2.0	1.4	6.6	
18-20	2,046	.4	10.3	20.6	41.7	.7	3.9	1.1	.2	1.1	4.2	4.7	2.7	1.1	10.0	18-20	1,890	6.9	16.5	41.0	2.2	7.2	1.1	1.1	7.2	2.6	2.5	2.1	7.1		
21-23	2,046	.6	11.1	21.8	51.8	1.1	4.8	1.1	1.1	1.1	4.8	4.7	2.1	1.1	8.4	21-23	1,890	.1	8.7	14.3	51.5	2.6	7.0	1.1	1.1	7.0	2.6	1.7	1.9	6.1	
All Hours	16,364	.7	15.7	27.5	42.6	1.7	5.9	1.2	.3	1.1	6.4	7.1	3.6	.0	12.3	All Hours	15,120	.2	13.7	27.0	35.1	1.8	6.6	.0	1.1	6.7	5.2	3.2	.0	1.6	9.8

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

CARSWELL AFB, FORT WORTH, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY												JUNE											
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <3 MI	Cellings <2000 Ft and/or Visibility <3 MI	Cellings <4000 Ft and/or Visibility <6 MI	Cloud Cover 3/10	Thunder (Attn or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Precipitation		
00-02	1,992	1	9.1	17.5	46.8	3.4	6.8	...	...	...	6.8	4.3	1.5	...	...	...	4.0	1.2	2.6	...	...	...	3.7
03-05	1,992	2	15.9	23.4	40.8	2.8	6.5	...	...	...	5.1	7.5	2.8	...	...	...	5.7	3.3	3.6	...	...	...	6.7
06-08	1,993	5	21.2	30.2	29.0	1.6	6.8	...	...	...	6.8	10.4	7.2	...	...	...	12.6	23.8	45.7	...	...	...	9.4
09-11	1,993	1	16.2	31.2	29.1	1.0	4.6	...	...	...	4.6	4.2	3.5	...	...	...	9.0	4.7	5.3	...	...	...	3.9
12-14	1,993	2	9.3	25.8	31.4	1.6	4.5	...	...	...	4.5	1.5	1.9	...	...	...	2.9	34.6	38.1	...	...	...	1.4
15-17	1,992	2	5.9	17.4	35.0	2.0	5.2	...	...	...	5.2	1.6	1.4	...	...	...	15.1	44.6	1.8	...	...	...	1.1
18-20	1,991	1	5.6	12.6	40.3	2.7	4.7	...	...	...	4.7	2.2	1.9	...	...	...	2.4	5.6	56.0	...	...	...	2.0
21-23	1,991	1	5.8	12.9	30.9	3.0	5.8	...	...	...	5.8	1.9	1.4	...	...	...	2.1	5.3	64.6	...	...	...	2.2
All Hours 15,617	2	111.1	225.5	382.2	2.3	5.6	...	...	...	...	5.6	4.2	2.7	...	...	...	3.6	1.6	2.3	...	...	...	3.8

JULY												AUGUST											
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <3 MI	Cellings <2000 Ft and/or Visibility <3 MI	Cellings <4000 Ft and/or Visibility <6 MI	Cloud Cover 3/10	Thunder (Attn or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Precipitation		
00-02	1,993	1	6.6	14.5	71.7	1.3	1.0	...	...	...	1.8	1.0	1.4	...	...	...	1.2	2.5	78.0	...	...	...	1.2
03-05	1,992	2	7.7	8.5	63.6	1.2	3.2	...	...	...	3.2	1.8	3.4	...	...	...	2.5	6.8	72.6	...	...	...	2.6
06-08	1,993	1	5.9	14.3	46.7	1.4	4.2	...	...	...	4.2	3.8	7.4	...	...	...	2.8	11.0	54.0	...	...	...	10.5
09-11	1,992	1	4.1	11.4	46.7	1.7	3.0	...	...	...	3.0	1.3	2.8	...	...	...	2.4	10.0	50.3	...	...	...	4.3
12-14	1,993	1	1.8	8.2	31.4	1.3	3.3	...	...	...	3.3	1.6	1.8	...	...	...	2.3	7.5	36.5	...	...	...	7
15-17	1,990	1	1.1	4.8	34.9	1.6	2.9	...	...	...	2.9	1.3	1.7	...	...	...	2.3	1.1	39.5	...	...	...	1.7
18-20	1,993	1	9	2.7	32.1	1.3	2.3	...	...	...	2.3	1.1	1.1	...	...	...	1.9	2.0	59.8	...	...	...	1.4
21-23	1,993	1	1.0	2.5	67.3	1.8	1.5	...	...	...	1.5	1.6	1.0	...	...	...	1.9	2.1	75.2	...	...	...	1.1
All Hours 15,619	2	2.4	7.1	51.9	1.1	2.8	...	...	...	...	2.8	1.2	2.3	...	...	...	2.2	5.6	58.2	...	...	...	2.8

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

... indicates that the condition has occurred exactly 0.00 percent of the time. A blank indicates that the data are not available.

CARSWELL AFB, FORT WORTH, TEXAS

Percentage Frequencies of Occurrences of Specified Weather Conditions

SEPTEMBER

Hours	Number of Observations	Cells < 1000 Ft and/or Visibility < 3 Mi	Cells < 2000 Ft and/or Visibility < 5 Mi	Thunder (With or Without Precipitation)	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision				
00-02 1,980	1	4.9	9.6	70.7	.4	3.9	2.4	2.4	4.4	00-02 2,046	3	7.6	14.5	67.8	.7	3.8	3.8	3.8	7.0
03-05 1,980	2	8.4	14.3	67.2	.6	4.9	3.2	3.2	7.3	03-05 2,046	8	10.4	19.3	64.8	1.2	5.0	4.8	4.8	10.4
06-08 1,980	2	13.1	24.1	54.4	.4	4.5	3.0	3.0	18.8	06-08 2,045	4	14.2	28.4	58.7	.6	4.9	10.1	10.3	1.18.9
09-11 1,979	4	11.9	20.7	49.9	.6	4.0	4.1	5.8	11.9	09-11 2,046	13.9	25.3	49.6	.4	4.9	4.9	9.1	9.1	13.9
12-14 1,980	4	4.3	14.1	48.1	.7	4.5	3.9	3.9	12.4	12-14 2,046	7.8	18.1	48.5	.1	3.6	3.8	2.1	2.9	4.8
15-17 1,980	1	4.0	8.9	46.5	1.7	4.7	3.3	3.3	2.0	15-17 2,046	4.9	10.6	51.6	.6	4.2	4.2	1.7	1.8	3.5
18-20 1,980	2	3.3	7.5	61.8	1.8	4.1	3.1	3.1	2.3	18-20 2,042	4.4	10.1	61.1	.6	4.1	4.1	2.0	2.7	4.9
21-23 1,978	2	3.4	7.2	70.1	1.2	3.9	3.0	3.0	1.2	21-23 2,045	3	5.1	10.5	68.2	1.1	4.0	4.0	3.8	4.7
All Hours 15,857	1	6.8	13.3	57.8	.9	4.3	3.1	3.1	6.4	All Hours 16,382	2	8.5	17.1	58.0	.7	4.3	4.0	4.8	8.5

OCTOBER

Hours	Number of Observations	Cells < 1000 Ft and/or Visibility < 3 Mi	Cells < 2000 Ft and/or Visibility < 5 Mi	Thunder (With or Without Precipitation)	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision				
00-02 1,980	1	4.9	9.6	70.7	.4	3.9	2.4	2.4	4.4	00-02 2,046	3	7.6	14.5	67.8	.7	3.8	3.8	3.8	7.0
03-05 1,980	2	8.4	14.3	67.2	.6	4.9	3.2	3.2	7.3	03-05 2,046	8	10.4	19.3	64.8	1.2	5.0	4.8	4.8	10.4
06-08 1,980	2	13.1	24.1	54.4	.4	4.5	3.0	3.0	18.8	06-08 2,045	4	14.2	28.4	58.7	.6	4.9	10.1	10.3	1.18.9
09-11 1,979	4	11.9	20.7	49.9	.6	4.0	4.1	5.8	11.9	09-11 2,046	13.9	25.3	49.6	.4	4.9	4.9	9.1	9.1	13.9
12-14 1,980	4	4.3	14.1	48.1	.7	4.5	3.9	3.9	12.4	12-14 2,046	7.8	18.1	48.5	.1	3.6	3.8	2.1	2.9	4.8
15-17 1,980	1	4.0	8.9	46.5	1.7	4.7	3.3	3.3	2.0	15-17 2,046	4.9	10.6	51.6	.6	4.2	4.2	1.7	1.8	3.5
18-20 1,980	2	3.3	7.5	61.8	1.8	4.1	3.1	3.1	2.3	18-20 2,042	4.4	10.1	61.1	.6	4.1	4.1	2.0	2.7	4.9
21-23 1,978	2	3.4	7.2	70.1	1.2	3.9	3.0	3.0	1.2	21-23 2,045	3	5.1	10.5	68.2	1.1	4.0	4.0	3.8	4.7
All Hours 15,857	1	6.8	13.3	57.8	.9	4.3	3.1	3.1	6.4	All Hours 16,382	2	8.5	17.1	58.0	.7	4.3	4.0	4.8	8.5

NOVEMBER

Hours	Number of Observations	Cells < 1000 Ft and/or Visibility < 3 Mi	Cells < 2000 Ft and/or Visibility < 5 Mi	Thunder (With or Without Precipitation)	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision				
00-02 1,965	6	12.3	20.4	60.4	.5	7.0	2.4	2.4	3	00-02 2,046	1.6	17.4	25.2	56.7	.1	6.9	3	3	7.4
03-05 1,965	1.3	15.5	24.4	58.0	.4	7.1	2.9	2.9	11.9	03-05 2,044	2.8	20.1	28.9	55.5	.1	7.8	3	3	9.0
06-08 1,970	1.4	19.1	28.7	48.8	.4	8.4	4.8	4.8	17.5	06-08 2,044	2.9	24.0	33.5	45.7	.2	9.1	4	4	10.4
09-11 1,970	4	16.8	27.9	47.7	.4	8.0	6.0	6.0	14.4	09-11 2,043	.8	23.1	32.7	38.8	.0	7.8	5	5	8.8
12-14 1,967	2	11.5	24.0	49.4	.5	6.6	2.9	2.9	4	12-14 2,043	1.1	18.3	28.0	41.5	.1	7.0	1	1	7.5
15-17 1,969	1	9.6	16.8	49.5	.4	6.2	2.9	2.9	6.0	15-17 2,043	1.1	15.3	23.6	44.0	.0	6.5	2	2	7.0
18-20 1,971	5	8.1	15.2	54.8	.2	4.7	2.4	2.4	7.0	18-20 2,045	.2	13.1	22.0	49.8	3.6	5.9	3	3	6.7
21-23 1,966	7	9.3	16.9	61.8	.3	5.2	2.2	2.2	4	21-23 2,046	.8	14.7	22.1	55.4	.2	5.9	3	3	6.4
All Hours 15,745	6	12.8	22.0	53.7	.4	6.6	3.3	3.3	10.5	All Hours 16,384	1.2	18.3	27.0	48.0	.1	7.1	3	3	7.9

DECEMBER

Hours	Number of Observations	Cells < 1000 Ft and/or Visibility < 3 Mi	Cells < 2000 Ft and/or Visibility < 5 Mi	Thunder (With or Without Precipitation)	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision				
00-02 1,965	6	12.3	20.4	60.4	.5	7.0	2.4	2.4	3	00-02 2,046	1.6	17.4	25.2	56.7	.1	6.9	3	3	7.4
03-05 1,965	1.3	15.5	24.4	58.0	.4	7.1	2.9	2.9	11.9	03-05 2,044	2.8	20.1	28.9	55.5	.1	7.8	3	3	9.0
06-08 1,970	1.4	19.1	28.7	48.8	.4	8.4	4.8	4.8	17.5	06-08 2,044	2.9	24.0	33.5	45.7	.2	9.1	4	4	10.4
09-11 1,970	4	16.8	27.9	47.7	.4	8.0	6.0	6.0	14.4	09-11 2,043	.8	23.1	32.7	38.8	.0	7.8	5	5	8.8
12-14 1,967	2	11.5	24.0	49.4	.5	6.6	2.9	2.9	4	12-14 2,043	1.1	18.3	28.0	41.5	.1	7.0	1	1	7.5
15-17 1,969	1	9.6	16.8	49.5	.4	6.2	2.9	2.9	6.0	15-17 2,043	1.1	15.3	23.6	44.0	.0	6.5	2	2	7.0
18-20 1,971	5	8.1	15.2	54.8	.2	4.7	2.4	2.4	7.0	18-20 2,045	.2	13.1	22.0	49.8	3.6	5.9	3	3	6.7
21-23 1,966	7	9.3	16.9	61.8	.3	5.2	2.2	2.2	4	21-23 2,046	.8	14.7	22.1	55.4	.2	5.9	3	3	6.4
All Hours 15,745	6	12.8	22.0	53.7	.4	6.6	3.3	3.3	10.5	All Hours 16,384	1.2	18.3	27.0	48.0	.1	7.1	3	3	7.9

ANNUAL

Hours	Number of Observations	Cells < 1000 Ft and/or Visibility < 3 Mi	Cells < 2000 Ft and/or Visibility < 5 Mi	Thunder (With or Without Precipitation)	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision				
All Hours 189,043	5	11.5	20.3	48.6	.9	5.3	3.4	3.4	10	All Hours 189,043	5	11.5	20.3	48.6	.9	5.3	3.4	3.4	10

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

--- indicates that the condition has occurred exactly 0.00 percent of the time. A blank indicates that the data are not available.

CARSWELL AFB, FORT WORTH, TEXAS WIND ROSES

JANUARY													FEBRUARY												
Dir.	0-3			7-10			11-15			17-21			22-27			28-31			31-40	41-47	48-55	56	Total	Mean Wind Speed	
	1-6	1-10	11-15	16-21	22-27	28-31	1-6	7-10	11-15	16-21	17-21	22-27	28-31												
N	.6	1.8	3.7	1.6	7	1.2	1.2	3.2	1.2	1.2	.6	.1										10.9	11.4		
NE	.2	2.8	1.2	1.5	1.7	2.0		2.9	4.9	1.2	1.1											9.3	10.1		
E	.3	7	1.6	1.1	0			1.8	6.3	1.0	1											3.1	6.8		
ESE	.5	9	4.6	1	0			1.9	6.1	1.2	1.1											2.8	7.6		
SE	.6	1.5	1.6	1.3	1.1	0		4.1	7.0	1.4	1.0											5.5	8.5		
SSE	1.0	1.8	2.7	3.8	1.4	0		10.7	9.9	1.3	1.3											11.7	10.6		
SW	.5	1.1	2.4	2.1	1.9	3	0	7.4	11.0	1.9	1.9											6.2	12.6		
WSW	.3	7	1.4	1.2	2.0	0		1.7	3.6	1.2	1.1											2.0	11.3		
W	.3	1.6	7	1.4	2.2	0		2.2	8.9	1.6	1.2											2.5	9.6		
WSW	.2	1.7	2.0	1.2	1.2	0		1.8	4.7	1.6	1.2											5.7	10.5		
W	.5	1.3	2.9	3.3	1.4	1.6	1	10.1	12.0	1.4	1.4											9.8	12.7		
WSW	14.3																					13.6			
TOT	21.3	18.5	28.3	26.6	8.2	2.6	.2	100.0	8.6	14.3												100.0	9.0		
TOTAL NUMBER OF OBSERVATIONS													TOTAL NUMBER OF OBSERVATIONS												
14953													13927												

MARCH													APRIL												
Dir.	0-3			7-10			11-15			17-21			22-27			28-31			31-40	41-47	48-55	56	Total	Mean Wind Speed	
	1-6	7-10	11-15	16-21	22-27	28-31	1-6	7-10	11-15	16-21	17-21	22-27	28-31												
N	.4	1.4	2.9	3.3	1.3	1.5	.1	10.0	11.7													7.3	11.3		
NE	.2	1.0	2.3	1.2	1.5	1.3	0	3.8	10.8	1.1	1.7											5.3	10.3		
E	.3	1.1	1.2	1.2	1.3	1.4		2.8	7.2	1.1	1.0											2.6	8.0		
ESE	.2	1.8	1.2	1.5	1.1	0		3.5	6.1	1.3	1.4											3.3	7.4		
SE	.4	1.2	2.2	1.1	1.3	1.1	0	5.4	9.3	1.4	1.4											6.1	9.4		
SSE	.3	1.7	3.9	2.2	1.2	1.1	0	15.4	14.9	1.5	1.5											20.9	13.7		
SW	.2	1.6	1.6	2.3	1.3	1.8	1	7.1	14.2	1.5	1.8											7.6	13.8		
WSW	.2	3	4	1.4	1.4	1.1	0	1.8	12.6	1.3	1.1											1.4	11.3		
W	.2	1.5	1.7	1.6	1.3	1.2	1	2.7	12.1	1.6	1.4											1.8	12.0		
WSW	.3	1.9	1.9	1.7	1.6	1.3	0	5.0	11.8	1.2	1.2											3.5	11.6		
W	.2	1.9	2.0	2.6	1.5	1.0	1	8.6	14.3	1.2	1.4											5.3	13.1		
WSW	10.0							10.0														9.8			
TOT	34.7	14.5	28.0	24.8	11.3	5.4	1.0	100.0	10.4	12.6	13.0	29.5	27.8	11.6	4.7	.7	.0					100.0	10.6		
TOTAL NUMBER OF OBSERVATIONS													TOTAL NUMBER OF OBSERVATIONS												
14958													13119												

**CARSWELL AFB, FORT WORTH, TEXAS
WIND ROSES**

		MAY										JUNE										1968
		5-7		8-10		11-15		16-20		21-31		5-7		8-10		11-15		16-20		21-31		
Dir.		4-6		7-10		11-15		16-20		21-31		4-6		7-10		11-15		16-20		21-31		
K		.2	1.7	2.1	1.8	.4	1.1	1.8	.4	1.1	.9	.1	.4	.3	1.1	.0	.0	.0	.0	.0	.0	
NE		.3	.8	1.4	.3	.1	.0	.0	.0	.0	3.7	2.9	1.8	.3	.0	.0	.0	.0	.0	.0	.0	.0
E		.4	1.2	1.3	.2	.0	.0	.0	.0	.0	3.4	3.1	1.4	1.2	.1	.0	.0	.0	.0	.0	.0	.0
SE		.3	2.1	1.6	1.4	.1	.0	.0	.0	.0	3.5	2.9	1.7	.7	.0	.0	.0	.0	.0	.0	.0	.0
SSE		.6	2.1	2.6	1.5	.0	.0	.0	.0	.0	35.7	11.0	6.2	4.4	.0	.0	.0	.0	.0	.0	.0	.0
SW		.9	2.7	2.2	2.9	3.5	1.1	.1	.0	.0	26.3	12.1	7.8	6.1	3.7	.3	.0	.0	.0	.0	.0	.0
WSW		.1	.3	.9	.2	.2	.1	.0	.0	.0	2.0	10.4	4.2	3.8	.2	.0	.0	.0	.0	.0	.0	.0
WNW		.1	.2	.3	.2	.1	.0	.0	.0	.0	1.1	9.3	1.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
NW		.1	.4	.4	.2	.1	.0	.0	.0	.0	1.3	9.2	1.1	.2	.1	.0	.0	.0	.0	.0	.0	.0
W		.2	.5	1.3	.4	.2	.1	.0	.0	.0	2.2	10.2	1.1	.4	.3	.1	.0	.0	.0	.0	.0	.0
CALM		11.1																				9.4
TOT		15.6	16.1	31.2	25.1	8.5	2.3	.2	.0	.0	100.0	9.3	34.4	17.9	34.6	22.6	8.2	2.2	.1	.0	.0	.0
		TOTAL NUMBER OF OBSERVATIONS										TOTAL NUMBER OF OBSERVATIONS										1519

		JULY										AUGUST										1967
		0-3		4-6		7-10		11-15		16-21		0-3		4-6		7-10		11-15		16-21		
Dir.		4-6		7-10		11-15		16-21		22-31		0-3		4-6		7-10		11-15		16-21		
K		.3	.8	.7	.9	.3	1.0	.0	.0	.0	2.5	1.8	.7	.8	.7	.4	.1	.1	.0	.0	.0	.0
NE		.3	.8	1.1	.2	.0	.0	.0	.0	.0	2.6	7.0	3.8	1.1	.3	.1	.0	.0	.0	.0	.0	.0
E		.9	1.9	1.9	.5	.0	.0	.0	.0	.0	5.3	4.8	2.1	1.8	.4	.1	.0	.0	.0	.0	.0	.0
SE		1.2	2.8	3.0	.8	.1	.0	.0	.0	.0	4.7	6.9	1.6	2.3	2.2	.4	.1	.0	.0	.0	.0	.0
SSE		1.8	3.6	6.8	3.1	.2	.0	.0	.0	.0	14.5	8.6	1.8	3.6	6.3	2.7	.3	.0	.0	.0	.0	.0
SW		1.4	1.9	1.2	6.3	1.2	.2	.0	.0	.0	24.9	9.3	1.9	4.7	9.3	4.0	.8	.1	.0	.0	.0	.0
WSW		.3	.8	1.5	1.0	.3	.2	.0	.0	.0	4.0	10.0	1.9	3.7	1.7	.5	.1	.1	.0	.0	.0	.0
WNW		.1	.3	.6	.2	.0	.0	.0	.0	.0	1.4	6.2	.1	.4	.5	.2	.0	.0	.0	.0	.0	.0
NW		.1	.2	.2	.0	.0	.0	.0	.0	.0	.5	6.9	.2	.2	.1	.0	.0	.0	.0	.0	.0	.0
W		.1	.4	.3	.1	.0	.0	.0	.0	.0	1.5	10.0	.2	.3	.3	.0	.0	.0	.0	.0	.0	.0
CALM		13.0																				15.2
TOT		28.0	28.3	31.6	16.9	2.5	.6	.0	.0	.0	100.0	7.4	34.2	24.1	36.0	13.0	2.2	.4	.0	.0	.0	.0
		TOTAL NUMBER OF OBSERVATIONS										TOTAL NUMBER OF OBSERVATIONS										1561

CARSWELL AFB, FORT WORTH, TEXAS WIND ROSES

SEPTEMBER

Dir.	Speed in Knots												Total	Mean Wind Speed			
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥56						
N	.5	1.6	2.4	3.3	2	1.1								6.0	6.5	7.7	9.7
NNE	.4	1.8	2.1	3	1.8									4.5	5.7	7.1	9.0
NNE	.4	1.4	1.4	1.4	1.4	1.4								3.7	4.2	4.8	5.3
E	.7	2.1	2.7	3.8	3.8	2.7								5.7	7.0	8.4	10.7
ESE	1.0	3.3	3.8	5.7	5.7	4.1								9.0	11.1	13.3	16.9
SE	1.9	3.7	5.6	8.4	8.4	5.6								13.5	16.5	20.5	26.1
SSE	1.3	1.0	2.3	1.8	1.4	1.1								2.6	3.0	3.4	3.9
SW	.2	.5	1.0	1.5	1.0	.5								2.8	3.4	4.0	4.6
WSW	.1	.3	.7	1.1	.8	.5								1.9	2.4	2.9	3.4
W	.1	.3	.7	1.1	.8	.5								2.2	2.8	3.4	4.0
WNW	.2	.5	1.0	1.5	1.0	.5								2.0	2.5	3.0	3.5
VARBL	.2	.7	1.0	.8	.3	.1								2.9	3.9	4.9	5.9
VAL	17.9													17.9			
TOT	25.2	23.5	33.0	34.5	31.1	17	.0	.0						100.0	6.8		
													TOTAL NUMBER OF OBSERVATIONS		1597		

OCTOBER

Dir.	Speed in Knots												Total	Mean Wind Speed			
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥56						
N	.5	1.5	3.0	2.0	1.5	1.2	.0							7.7	9.7		
NNE	.2	1.0	1.4	1.5	1.2	.0								4.3	5.3		
NNE	.2	1.6	1.7	1.8	1.0	.0								4.7	5.7		
E	.5	1.9	2.3	3.3	3.3	2.3								6.3	7.7		
ESE	1.0	2.2	2.4	4.6	4.6	3.0								9.3	11.7		
SE	1.9	2.2	2.7	4.6	4.6	3.0								10.5	13.9		
SSE	1.3	1.3	2.6	2.0	1.8	1.1								3.8	4.8		
SW	.1	.3	.7	1.1	.8	.5								2.8	3.4		
WSW	.1	.3	.7	1.1	.8	.5								2.8	3.4		
W	.1	.3	.7	1.1	.8	.5								2.8	3.4		
WNW	.2	.5	1.0	1.5	1.0	.5								3.7	4.6		
VARBL	.2	.7	1.0	.8	.3	.1								3.7	4.6		
VAL	20.0													20.0			
TOT	27.5	26.6	29.8	26.5	24.4	11.1	.1	.1						100.0	7.0		
													TOTAL NUMBER OF OBSERVATIONS		1585		

NOVEMBER

Dir.	Speed in Knots												Total	Mean Wind Speed			
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥56						
N	.7	2.0	3.4	3.0	1.0	.5	1.1	.0						10.7	10.8		
NNE	.3	1.0	1.9	1.4	.5	.1	.0							5.3	6.0		
NNE	.3	1.7	1.6	1.1	.2	.0								4.7	5.4		
E	.3	1.7	2.7	2.7	2.2	1.7								8.3	9.8		
ESE	.6	1.4	1.4	1.4	.4	.0								3.9	4.7		
SE	1.2	1.7	2.3	3.2	3.2	2.3								6.7	8.2		
SSE	1.5	1.3	2.8	2.9	1.2	.3	.0	.0						9.1	11.3		
SW	.3	.5	1.0	1.5	1.0	.5								3.7	4.6		
WSW	.3	.5	1.0	1.5	1.0	.5								3.7	4.6		
W	.3	.5	.7	.4	.2	.1								2.2	2.7		
WNW	.2	.4	.8	1.1	.8	.5								3.7	4.6		
VARBL	.4	1.3	2.5	2.6	1.1	.5	1.1	1.1						8.5	11.7		
VAL	15.5													15.5			
TOT	23.1	16.7	28.0	20.5	7.0	2.2	.3	.1						100.0	8.3		
													TOTAL NUMBER OF OBSERVATIONS		1574		

DECEMBER

Dir.	Speed in Knots												Total	Mean Wind Speed			
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥56						
N	.6	1.7	3.9	3.3	1.0	.4	1.1	.0						10.9	11.0		
NNE	.2	1.1	1.1	1.0	.4	.2	.0							5.0	6.0		
NNE	.2	1.6	1.6	1.1	.1	.0								4.6	5.9		
E	.3	1.8	2.8	2.8	2.8	2.8								8.8	10.8		
ESE	.6	1.5	1.6	1.6	1.1	.0								6.7	8.2		
SE	1.3	2.0	2.6	3.1	3.1	2.6								11.1	14.1		
SSE	1.5	2.0	2.6	2.4	1.8	.8	.0	.0						9.1	11.1		
SW	.6	1.4	2.6	2.4	1.8	.8	.0	.0						8.0	10.4		
WSW	.6	1.4	2.6	2.4	1.8	.8	.0	.0						8.0	10.4		
W	.4	.9	1.8	1.4	.4	.0	.0	.0						4.9	5.9		
WNW	.4	.9	1.8	1.4	.4	.0	.0	.0						4.9	5.9		
VARBL	.4	1.1	2.3	1.6	.4	.2	.0	.0						7.2	10.4		
VAL	13.9													13.9			
TOT	21.7	19.7	30.0	19.7	6.6	1.9	.2	.1						100.0	8.2		
													TOTAL NUMBER OF OBSERVATIONS		1654		

ANNUAL

Dir.	Speed in Knots												Total	Mean Wind Speed			
	0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	48-55	≥56						
N	5	1.4	2.5	2.1	1.7	.3	.0	.0						7.4	10.6		
NNE	2	.8	1.7	1.1	.4	.1	.0	.0						4.8	6.1		
NNE	3	.9	1.0	1.2	.0	.0	.0	.0						5.4	6.5		
E	6	1.4	2.3	2.8	2.8	2.8								13.6	16.5		
ESE	7	2.0	2.8	2.9	2.8	2.0								13.2	16.8		
SE	17	2.2	3.4	3.0	1.7	.2	.0	.0						26.7	33.9		
SSE	14	1.1	2.7	2.4	1.0	.3	.0	.0	.0					19.4	24.8		
SW	2	.6	1.1	1.8	.3	.1	.0	.0						5.0	6.2		
WSW	2	.6	1.1	1.8	.3	.1	.0	.0						5.0	6.2		
W	2	.5	1.5	1.3	.4	.1	.0	.0						4.1	5.1		
WNW	2	.5	1.5	1.3	.4	.1	.0	.0						4.1	5.1		
VARBL	3	.8	1.7	1.7	.7	.4	.1	.0						5.7	7.7		
VAL	13.6													13.6			
TOT	20.0	16.8	31.3	20.2	6.8	2.3	.3	.0	.0					100.0	8.4		
													TOTAL NUMBER OF OBSERVATIONS		16347		

DYESS AFB ABILENE, TEXAS

(Lat. 32°26'N, Long. 99°51'W, Elev. 1777 ft.)

Dyess AFB is located five miles west of Abilene in the extreme western part of central Texas in an area known as the Lower Plains. The surface is rolling, although large flat areas occur in some places. Elevations decrease gradually to the east and southeast to the Gulf of Mexico, a distance of 350 miles. A low range of hills extends from the southeast through west to northwest with elevations ranging between 2,000 and 3,000 feet.

Dyess lies roughly on the boundary between the humid climate of east Texas and semiarid climate to the west and north. Southerly and southeasterly circulation brings moisture upslope to the Lower Plains which results in occasional nighttime stratus or fog at any time of the year, with the maximum occurring during January and February. From November through April frontal activity is quite active with cold dry polar air replacing the warm moist tropical air. With an easterly flow low ceilings and visibilities may last several days, and with temperatures near freezing serious icing will occur. The strongest winds are from a northerly direction and result from the passage of cold fronts. Blowing dust occurs most often with these fronts, however sudden convective wind gusts from thunderstorms may bring about short periods of severe blowing dust. Flight restrictions caused by blowing dust are usually of short duration.

Thunderstorms do occur in all months of the year with most of them being confined to the spring and summer months. During the spring most

DYESS AFB (Cont'd)

thunderstorms are of the squall line type, while in the summer months they are more likely to be of the isolated or air mass type. Damaging hail at the surface is infrequent, however chances of hail and severe turbulence aloft are great, even up to altitudes of 45,000 feet.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from December 1943-December 1945 and August 1946-March 1965; with the exception of cloud cover for which data are not available prior to 1946.

DYESS AFB ABILENE, TEXAS

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	55.7	60.1	67.9	77.4	84.7	92.0	94.9	95.4	88.0	78.7	65.4	57.9	76.6
Mean	44.2	48.7	55.5	65.2	73.4	81.1	84.2	84.2	76.9	67.3	54.1	46.7	65.2
Minimum	32.2	36.9	42.7	52.6	61.7	69.7	72.9	72.6	65.3	55.5	42.3	35.1	53.4
	Record Temperature Extremes												
Maximum	86	89	92	99	108	106	107	108	106	100	92	89	
Minimum	-9	1	9	29	38	50	57	53	42	32	16	10	
	Period of Record: 1943-1964												
	Precipitation (Inches)												
Precipitation	.94	.93	.90	2.35	4.12	2.55	2.66	1.87	1.93	2.23	1.01	1.01	22.48
Snowfall*	1.6	1.5	.5	T	T	T	T	.0	T	T	.1	.6	4.3
(*Hail was included in Snowfall Period of Record: 1943-1964													
Summary prior to January 1956) Snowfall 1946-1964													
	Surface Winds (Knots) - Record Peak Gusts												
Wind Direction	NW	W	WSW	WSW	WNW	N	NW	NNE	N	NNW	WNW	WNW	WNW
Velocity	42	50	49	48	43	54	33	58	40	42	42	42	43
	Period of Record: 1957-1964												

Maximum and/or Minimum Anemometer Height: 25 feet 04/56; 13 feet 04/62

DYESS AFB, ABILENE, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY														FEBRUARY																			
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <3 MI	Cellings <2000 Ft and/or Visibility <3 MI	Cellings <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SM1	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision	Hours	Number of Observations	Cellings <200 Ft and/or Visibility <3 MI	Cellings <2000 Ft and/or Visibility <3 MI	Cellings <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SM1	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision
00-02	1,990	1.3	13.8	18.0	55.3	.2	4.1	2.0	2.5	....	8.2	3.9	.1	.4	.2	4.6	00-02	1,788	1.0	16.5	21.9	53.9	.6	6.3	1.0	2.1	....	9.3	6.9	.1	.2	1.6	8.6
03-05	1,992	1.7	16.4	26.5	55.6	..	4.0	1.9	2.4	....	8.1	6.3	....	..	..	6.5	03-05	1,788	2.2	19.3	26.4	54.9	.5	6.1	2.0	2.7	..	10.5	9.2	.1	.3	1.4	10.8
06-08	1,992	2.0	18.9	23.2	53.7	....	4.5	2.0	2.8	....	8.7	7.2	.1	.2	..	7.6	06-08	1,788	2.4	22.0	27.4	44.3	.3	7.3	2.0	2.5	....	11.5	11.3	.2	.3	1.7	13.5
09-11	1,993	.9	16.6	21.8	37.2	....	3.0	2.1	2.4	....	8.0	6.4	.1	.3	.4	7.0	09-11	1,788	1.9	24.2	29.2	49.6	.1	7.0	1.6	2.8	....	10.9	10.6	.2	.2	2.1	13.1
12-14	1,990	.6	14.2	20.2	40.4	....	3.5	1.4	2.6	....	7.0	3.6	....	.3	.8	5.7	12-14	1,788	1.0	18.4	25.5	49.3	.1	6.1	.8	2.1	....	8.9	7.6	.2	.3	2.3	10.5
15-17	1,992	.6	11.5	18.3	43.2	....	3.2	2.0	2.4	....	7.1	3.7	.1	.2	1.4	5.4	15-17	1,788	.7	14.2	22.0	30.5	.2	5.4	1.0	2.1	..	8.2	5.8	.1	.2	3.0	9.0
18-20	1,993	.6	10.6	16.1	47.3	.2	3.3	1.7	1.6	....	6.2	4.0	.1	.1	1.1	5.3	18-20	1,788	1.2	13.1	20.0	44.0	.3	5.9	.6	2.1	....	8.6	7.1	.4	.2	2.3	9.9
21-23	1,992	1.1	11.8	16.1	55.4	.1	3.6	2.0	2.0	....	7.4	3.9	....	.3	.6	4.8	21-23	1,788	1.6	14.2	19.5	50.8	1.0	7.0	1.0	1.5	..	9.4	7.4	.3	.2	1.9	9.6
All Hours	15,614	1.1	14.2	19.3	47.0	.1	3.0	1.9	2.3	....	7.6	5.0	.1	.2	.6	5.9	All Hours	14,921	1.6	17.7	23.7	52.9	.4	6.4	1.2	2.2	..	9.6	8.2	.2	.7	2.0	10.6

MARCH														APRIL																			
Hours	Number of Observations	Cellings <200 Ft and/or Visibility <3 MI	Cellings <2000 Ft and/or Visibility <3 MI	Cellings <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SM1	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision	Hours	Number of Observations	Cellings <200 Ft and/or Visibility <3 MI	Cellings <2000 Ft and/or Visibility <3 MI	Cellings <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	SM1	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision
00-02	1,991	.5	10.1	15.2	55.1	.3	2.7	.5	.5	....	3.6	2.4	....	..	..	2.1	00-02	1,795	.4	8.5	14.8	53.6	2.0	4.8	.1	..	..	4.9	1.4	..	..	1.4	3.0
03-05	1,991	1.1	11.2	17.3	53.3	.4	4.0	.9	.6	....	6.2	4.0	....	.1	1.6	5.7	03-05	1,786	.6	11.9	18.5	56.8	1.6	4.5	.2	..	..	4.6	2.3	....	..	1.4	3.7
06-08	1,991	1.3	14.9	22.5	43.9	.2	4.7	.6	1.2	....	6.1	6.4	.5	..	2.4	9.2	06-08	1,782	.7	16.4	25.3	44.0	.8	5.9	.2	..	..	6.0	4.2	.1	..	1.6	5.7
09-11	1,991	.9	15.4	23.1	40.7	.1	4.2	.6	1.3	....	3.4	5.7	.6	..	2.6	8.9	09-11	1,780	.1	14.4	22.8	50.1	.6	4.9	.1	..	..	4.9	2.8	.1	..	1.6	4.5
12-14	1,992	.3	10.6	19.7	46.6	.5	3.0	.4	1.1	....	4.4	2.9	.2	..	3.9	7.0	12-14	1,780	....	9.2	19.7	40.3	.8	4.5	....	.1	..	4.6	1.4	.1	..	2.7	4.1
15-17	1,990	....	9.2	17.4	36.1	.3	2.4	.2	.7	..	3.1	2.4	.2	..	4.9	7.5	15-17	1,727	.1	6.3	15.3	44.0	1.9	4.9	....	..	..	4.9	.9	.1	..	3.6	4.5
18-20	1,990	.3	7.7	16.2	43.0	.6	2.6	.2	.6	....	3.4	2.1	.1	..	5.5	7.7	18-20	1,786	....	6.1	11.2	46.2	2.2	4.5	.1	..	..	4.5	.8	.1	..	2.7	3.5
21-23	1,991	.1	6.9	14.0	53.2	.5	2.5	.4	.5	.1	3.3	1.5	....	..	3.1	4.6	21-23	1,727	.1	6.7	12.0	50.1	2.1	4.7	.2	..	..	4.9	.9	..	..	2.2	3.1
All Hours	15,607	.6	10.7	18.2	46.0	.4	3.3	.5	.8	.0	4.5	3.4	.2	.0	3.3	6.9	All Hours	14,909	.2	9.8	17.4	45.9	1.5	4.8	.1	.0	..	4.9	1.8	.0	..	2.2	4.0

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 ... indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

DYESS AFB, ABILENE, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY														JUNE																						
Hours	Number of Observations	Cells - 200 Ft and/or Visibility < 3 M	Cells - 300 Ft and/or Visibility < 3 M	Cells - 400 Ft and/or Visibility < 3 M	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Restrictions to Vision	Hours	Number of Observations	Cells - 200 Ft and/or Visibility < 3 M	Cells - 300 Ft and/or Visibility < 3 M	Cells - 400 Ft and/or Visibility < 3 M	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Restrictions to Vision			
00-02	1,893	4	17	34	2.5	2.7	2.1	0	0	0	0	0	0	0	0	0	00-02	1,798	3.5	5.2	6.0	2.9	4.2	0	0	0	0	0	0	0	0	0	0	0		
03-05	1,895	5	10.6	15.5	6.7	3.4	6.7	0	0	0	0	0	0	0	0	0	03-05	1,800	5.0	7.9	9.8	1.5	3.9	0	0	0	0	0	0	0	0	0	0	0	0	
06-08	1,857	1.0	14.3	21.5	25.6	1.7	5.1	0	0	0	0	0	0	0	0	0	06-08	1,778	7.1	12.7	22.7	4.8	2.3	0	0	0	0	0	0	0	0	0	0	0	0	0
09-11	1,860	1	11.0	22.5	17.6	3.7	1.5	0	0	0	0	0	0	0	0	0	09-11	1,779	5.4	13.5	9.3	4.6	2.3	0	0	0	0	0	0	0	0	0	0	0	0	0
12-14	1,897	1	6.6	17.4	16.4	3.2	3.3	0	0	0	0	0	0	0	0	0	12-14	1,809	3.1	5.7	22.7	1.3	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0
15-17	1,856	1	4.5	12.6	20.0	2.8	3.4	0	0	0	0	0	0	0	0	0	15-17	1,779	3.2	5.9	23.3	1.6	2.6	0	0	0	0	0	0	0	0	0	0	0	0	0
18-20	1,896	1	3.4	5.4	12.9	3.4	3.4	0	0	0	0	0	0	0	0	0	18-20	1,806	1	2.0	4.5	25.7	2.7	3.4	0	0	0	0	0	0	0	0	0	0	0	0
21-23	1,898	1	5.6	21.0	12.4	3.5	2.5	0	0	0	0	0	0	0	0	0	21-23	1,806	2.3	4.7	61.2	2.5	3.9	0	0	0	0	0	0	0	0	0	0	0	0	
All Hours 15,566	1	6.1	15.7	42.1	2.3	3.7	3.7	0	0	0	0	0	0	0	0	0	All Hours 15,254	1	3.9	7.9	56.7	1.7	3.1	0	0	0	0	0	0	0	0	0	0	0		

JULY														AUGUST																						
Hours	Number of Observations	Cells - 200 Ft and/or Visibility < 3 M	Cells - 300 Ft and/or Visibility < 3 M	Cells - 400 Ft and/or Visibility < 3 M	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Restrictions to Vision	Hours	Number of Observations	Cells - 200 Ft and/or Visibility < 3 M	Cells - 300 Ft and/or Visibility < 3 M	Cells - 400 Ft and/or Visibility < 3 M	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Restrictions to Vision			
00-02	1,898	1	1.1	3.1	2.5	1.7	2.4	0	0	0	0	0	0	0	0	0	00-02	1,723	7	9	75.3	1.0	1.7	0	0	0	0	0	0	0	0	0	0	0		
03-05	1,857	2.5	4.3	6.0	6.0	2.3	4.3	0	0	0	0	0	0	0	0	0	03-05	1,791	1.4	1.9	72.6	1.8	2.3	0	0	0	0	0	0	0	0	0	0	0	0	
06-08	1,857	3.6	6.3	7.6	1.6	4.7	1.6	0	0	0	0	0	0	0	0	0	06-08	1,692	2.7	4.1	59.9	1.7	2.7	0	0	0	0	0	0	0	0	0	0	0	0	0
09-11	1,886	3.2	5.1	5.1	7	3.3	3.3	0	0	0	0	0	0	0	0	0	09-11	1,696	3.0	6.0	59.2	1.5	2.4	0	0	0	0	0	0	0	0	0	0	0	0	0
12-14	1,866	1.3	1.9	3.2	1.5	2.5	2.5	0	0	0	0	0	0	0	0	0	12-14	1,691	1.7	1.6	45.5	1.0	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0
15-17	1,866	5	3.4	3.5	5.7	3.5	3.5	0	0	0	0	0	0	0	0	0	15-17	1,693	5	1.6	46.8	2.5	2.6	0	0	0	0	0	0	0	0	0	0	0	0	0
18-20	1,859	1	1.2	5.2	2.7	2.9	2.9	0	0	0	0	0	0	0	0	0	18-20	1,691	5	1.7	52.1	2.3	2.8	0	0	0	0	0	0	0	0	0	0	0	0	0
21-23	1,866	5	1.1	6.2	4	1.6	1.6	0	0	0	0	0	0	0	0	0	21-23	1,692	5	1.3	42.2	1.3	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0
All Hours 15,271	0	1.6	3.7	23.7	1.7	3.1	3.1	0	0	0	0	0	0	0	0	0	All Hours 15,014	0	1.3	2.6	42.1	1.3	2.3	0	0	0	0	0	0	0	0	0	0	0	0	

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--- indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

**DYESS AFB, ABILENE, TEXAS
Percentage Frequencies of Occurrence
of Specified Weather Conditions**

SEPTEMBER

Hours	Number of Observations	Dewlings <200 Ft and/or Visibility <1/2 Mi	Dewlings <200 Ft and/or Visibility <3/4 Mi	Dewlings <200 Ft and/or Visibility <1/2 Mi	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,889	1.5	7.6	70.8	1.4	1.2	1.1	1.1	1.1	4.2	1.1	1.1	1.1	1.1	8
03-05	1,885	1.1	11.1	67.9	1.5	1.4	1.1	1.1	1.1	4.4	1.1	1.1	1.1	1.1	14
06-08	1,891	1.6	11.6	56.3	3.3	4.4	1.1	1.1	1.1	4.4	1.1	1.1	1.1	1.1	2.9
09-11	1,889	1.6	17.0	56.5	3.3	3.7	1.1	1.1	1.1	3.7	1.1	1.1	1.1	1.1	1.3
12-14	1,887	1.2	5.8	12.7	48.8	5.0	1.1	1.1	1.1	4.0	1.1	1.1	1.1	1.1	7
15-17	1,890	1.2	5.5	50.9	4.8	4.2	1.1	1.1	1.1	4.2	1.1	1.1	1.1	1.1	5
18-20	1,889	1.1	4.0	67.1	3.1	3.3	1.1	1.1	1.1	3.3	1.1	1.1	1.1	1.1	7
21-23	1,887	1.1	4.0	60.8	3.1	4.0	1.1	1.1	1.1	4.0	1.1	1.1	1.1	1.1	6
All Hours 15,109	1.6	10.6	60.5	7.4	4.0	4.0	1.1	1.1	1.1	4.0	1.0	0.0	1.1	1.1	11

OCTOBER

Hours	Number of Observations	Dewlings <200 Ft and/or Visibility <1/2 Mi	Dewlings <200 Ft and/or Visibility <3/4 Mi	Dewlings <200 Ft and/or Visibility <1/2 Mi	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,992	1.5	7.4	11.4	67.9	1.5	5.3	1.1	1.1	5.3	1.9	1.1	1.1	1.1	2.0
03-05	1,991	1.7	9.4	14.4	69.3	1.9	4.9	1.1	1.1	4.9	3.1	1.1	1.1	1.1	3.4
06-08	1,992	1.9	12.5	17.2	57.3	5.0	5.6	1.1	1.1	5.6	4.5	1.1	1.1	1.1	4.8
09-11	1,992	1.5	11.0	17.3	55.3	4.4	5.1	1.1	1.1	5.1	3.0	1.1	1.1	1.1	3.6
12-14	1,991	1.1	7.3	14.3	55.8	4.4	4.3	1.1	1.1	4.3	2.1	1.1	1.1	1.1	2.6
15-17	1,990	1.1	4.6	10.5	54.2	4.4	4.0	1.1	1.1	4.0	1.1	1.1	1.1	1.1	1.4
18-20	1,992	1.1	4.4	64.4	1.0	4.5	1.1	1.1	1.1	4.5	1.2	1.1	1.1	1.1	1.4
21-23	1,992	1.7	5.2	67.7	66.6	1.9	4.1	1.1	1.1	4.1	1.4	1.1	1.1	1.1	1.4
All Hours 15,613	1.4	7.7	12.8	60.3	7.7	4.7	1.1	1.1	1.1	4.7	2.3	1.1	1.1	1.1	2.6

NOVEMBER

Hours	Number of Observations	Dewlings <200 Ft and/or Visibility <1/2 Mi	Dewlings <200 Ft and/or Visibility <3/4 Mi	Dewlings <200 Ft and/or Visibility <1/2 Mi	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,889	1.7	10.2	15.0	64.9	1.1	5.8	1.1	1.1	5.8	2.8	1.1	1.1	1.1	4.4
03-05	1,889	1.4	13.0	18.7	68.7	1.4	6.3	1.1	1.1	6.3	4.3	1.1	1.1	1.1	4.6
06-08	1,890	1.2	14.5	19.0	59.9	1.7	5.9	1.1	1.1	5.9	4.7	1.1	1.1	1.1	5.0
09-11	1,890	1.6	14.6	19.3	52.1	1.2	5.2	1.1	1.1	5.2	4.8	1.1	1.1	1.1	5.6
12-14	1,888	1.3	10.7	17.0	52.2	1.2	4.9	1.1	1.1	4.9	3.8	1.1	1.1	1.1	4.7
15-17	1,887	1.2	6.3	12.3	53.4	1.2	3.9	1.1	1.1	3.9	3.1	1.1	1.1	1.1	4.0
18-20	1,889	1.3	7.7	11.7	50.1	1.1	4.2	1.1	1.1	4.2	2.9	1.1	1.1	1.1	3.7
21-23	1,896	1.8	8.3	11.7	63.4	1.1	4.8	1.1	1.1	4.7	2.9	1.1	1.1	1.1	2.9
All Hours 15,112	1.8	10.9	15.7	57.0	1.2	5.1	1.1	1.1	1.1	5.1	3.8	1.1	1.1	1.1	4.3

ANNUAL

Hours	Number of Observations	Dewlings <200 Ft and/or Visibility <1/2 Mi	Dewlings <200 Ft and/or Visibility <3/4 Mi	Dewlings <200 Ft and/or Visibility <1/2 Mi	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
All Hours 148,212	1.5	8.6	13.8	52.9	7.9	4.1	1.4	1.6	1.0	5.0	2.7	1.1	1.0	1.9	3.7

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
--- indicates that the condition has occurred exactly 0.00 percent of the time.
A blank indicates that the data are not available.

DYESS AFB, ABILENE, TEXAS WIND ROSES

JANUARY

Dir.	Speed in Knots				Total	Wind Speed
	0-3	4-6	7-10	11-16		
N	0	0	2.0	2.0	4.0	12.7
NNE	2	1.2	2.0	1.7	5.9	6.3
NW	0	0	1.4	2.2	3.6	10.5
E	0	0	1.4	1.2	2.6	8.6
ESE	0	0	1.4	1.2	2.6	8.6
SE	0	0	1.4	1.2	2.6	8.6
ENE	0	0	1.4	1.2	2.6	8.6
SSE	4	0	0	0	4.0	10.0
S	0	0	1.4	1.2	2.6	8.6
SSW	1	0	0	0	1.0	12.1
SW	1	0	0	0	1.0	12.1
WSW	0	0	0	0	0	9.0
W	0	0	0	0	0	10.5
WNW	0	0	0	0	0	11.7
NW	0	0	0	0	0	8.7
NNW	0	0	0	0	0	3.7
N	0	0	0	0	0	8.5
VARBL.	0	0	0	0	0	9.1
CALM	6	3	0	0	9	6.3
TOT	16.1	18.0	28.1	24.5	76.7	100.0

TOTAL NUMBER OF OBSERVATIONS 14680

FEBRUARY

Dir.	Speed in Knots				Total	Wind Speed
	0-3	4-6	7-10	11-16		
N	0	0	2.7	3.5	6.2	10.9
NNE	4	1.2	2.1	1.8	9.1	6.1
NW	0	0	1.7	1.3	3.0	10.1
E	0	0	1.7	1.3	3.0	8.2
ESE	0	0	1.7	1.3	3.0	6.4
SE	0	0	1.7	1.3	3.0	6.1
ENE	0	0	1.7	1.3	3.0	7.9
SSE	0	0	0	0	0	6.1
S	0	0	2.0	2.4	4.4	12.3
SSW	1	0	0	0	1.0	11.7
SW	1	0	0	0	1.0	12.9
WSW	0	0	0	0	0	10.5
W	0	0	0	0	0	11.7
WNW	0	0	0	0	0	9.6
NW	0	0	0	0	0	8.3
NNW	0	0	0	0	0	9.3
N	0	0	0	0	0	6.2
VARBL.	0	0	0	0	0	6.2
CALM	4	3	0	0	7	4.3
TOT	13.2	18.2	27.9	25.6	75.9	100.0

TOTAL NUMBER OF OBSERVATIONS 14253

MARCH

Dir.	Speed in Knots				Total	Wind Speed
	0-3	4-6	7-10	11-16		
N	0	0	2.2	2.8	5.0	12.4
NNE	4	0	1.7	1.9	3.6	11.0
NW	0	0	1.2	1.4	2.6	7.7
E	0	0	1.4	1.4	2.8	7.0
ESE	0	0	1.4	1.4	2.8	7.0
SE	0	0	1.6	1.5	3.1	9.1
ENE	0	0	1.6	1.5	3.1	9.1
SSE	4	1.1	0.6	0.6	6.3	12.5
S	0	0	2.3	2.3	4.6	14.1
SSW	5	1.1	2.3	2.4	10.8	12.8
SW	5	1.1	2.3	2.4	10.8	14.1
WSW	0	0	0	0	0	11.8
W	0	0	1.2	1.6	2.8	12.0
WNW	0	0	0	0	0	11.8
NW	0	0	0	0	0	11.8
NNW	0	0	0	0	0	11.8
N	0	0	0	0	0	11.8
VARBL.	0	0	0	0	0	11.8
CALM	3	9	0	0	12	3.9
TOT	10.6	14.0	24.9	31.6	61.1	100.0

TOTAL NUMBER OF OBSERVATIONS 14616

APRIL

Dir.	Speed in Knots				Total	Wind Speed
	0-3	4-6	7-10	11-16		
N	0	0	1.9	2.0	3.9	6.8
NNE	3	0	1.6	1.7	3.3	5.5
NW	0	0	1.3	1.3	2.6	11.6
E	0	0	1.3	1.3	2.6	8.2
ESE	0	0	1.3	1.3	2.6	7.9
SE	0	0	1.3	1.3	2.6	10.5
ENE	0	0	1.3	1.3	2.6	10.5
SSE	0	0	1.8	2.0	3.8	11.4
S	0	0	2.3	2.3	4.6	13.5
SSW	0	0	2.3	2.3	4.6	14.1
SW	0	0	2.3	2.3	4.6	14.1
WSW	0	0	1.6	1.6	3.2	11.6
W	0	0	1.6	1.6	3.2	10.8
WNW	0	0	1.3	1.3	2.6	11.7
NW	0	0	1.3	1.3	2.6	11.7
NNW	0	0	1.3	1.3	2.6	11.7
N	0	0	1.3	1.3	2.6	11.7
VARBL.	0	0	0	0	0	11.7
CALM	2	8	13	10	33	2.5
TOT	7.8	13.8	26.0	36.1	83.7	100.0

TOTAL NUMBER OF OBSERVATIONS 13883

DYESS AFB, ABILENE, TEXAS WIND ROSES

SEPTEMBER

Dir.	Speed in Knts					Total	Freq.	%	Dir.	Speed in Knts					Total	Mean Wind Speed		
	0-5	6-10	11-15	16-20	21-25					26-30	31-40	41-47	48-55	56				
V	16	13	22	11	4	0	57	9.2	SE	9	15	23	19	6	12	0	76	9.7
ENE	5	10	18	19	2	0	43	6.3	SSE	6	9	13	16	1	1	0	46	7.6
E	4	10	17	11	0	0	31	4.5	SSE	5	8	11	10	0	0	0	34	5.8
ESE	5	12	18	6	1	0	42	6.1	SE	8	14	20	17	0	0	0	59	8.0
S	19	21	28	24	2	0	94	13.6	SE	8	13	23	11	2	0	0	57	8.4
SSE	21	24	32	27	10	2	127	18.8	SSE	11	22	37	17	1	1	0	134	14.4
S	10	17	24	18	9	2	78	11.1	SSW	11	22	41	18	8	0	0	100	11.2
SSW	10	17	24	18	9	2	78	11.1	SW	15	16	17	13	7	0	0	68	8.5
SW	5	5	7	11	0	0	38	5.4	WSW	7	7	16	2	0	0	0	32	6.0
WSW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0	34	4.9	WNW	5	8	16	2	1	0	0	32	6.0
WNW	5	4	7	11	0	0	34	4.9	W	5	8	16	2	1	0	0	32	6.0
W	5	4	7	11	0	0</												

ELLINGTON AFB, HOUSTON, TEXAS (Lat. 29°37'N, Long. 95°10'W., Elev. 39 ft.)

Ellington AFB is situated eight miles west of Galveston Bay and 32 miles northwest of the Gulf of Mexico, in the flat coastal plain. Low stratus and fog cause most of the adverse weather conditions. Fog or stratus can be expected during any month of the year with high dewpoints and low level winds from the southeast. The greatest frequency occurs during December and January. Ceilings and visibilities generally improve several hours after sunrise.

Fronts are most active from November through March. Freezing rain or snow are insignificant as most freezing temperatures last only a few hours.

Thunderstorms occur in all months of the year with the maximum frequency occurring in July and August, but the strongest winds are associated with squall lines occurring in May and June. Hurricanes may affect this area from June through October with the maximum frequency in August.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from July 1941-February 1946 and January 1950-December 1964; with the exception of cloud cover for which data are not available prior to 1946.

ELLINGTON AFB HOUSTON, TEXAS

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (°F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	63.0	66.2	71.4	77.5	84.4	89.8	92.1	92.3	88.0	81.6	71.0	64.4	78.4
Mean	53.7	57.3	62.2	69.1	75.8	81.5	83.7	83.7	79.5	71.5	61.1	54.9	69.4
Minimum	44.1	48.0	52.6	60.3	66.9	72.8	75.0	74.7	70.7	61.1	50.8	45.0	60.1

Record Temperature Extremes

Maximum	82	87	88	93	95	99	104	103	101	96	89	84
Minimum	16	15	22	39	46	58	68	65	46	37	24	17
	Period of Record: 1941-1946, 1950-1964											

MONTHLY MEANS

Precipitation (Inches)

Precipitation	3.00	3.93	2.47	3.47	3.76	4.30	4.45	4.50	4.72	3.59	3.72	4.09	45.98
Snowfall*	.1	.3	.0	T	T	T	.0	.0	.0	.0	.0	.0	.4
	(*Hail was included in Snowfall Period of Record: Precipitation 1941-1946, 1950-1964 Summary prior to January 1956) Snowfall 1946, 1950-1964												

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	WNW	N	WNW	WNW	WNW	N	ESE	NW	NNE	N	N	ESE
Velocity	60	56	52	45	65	60	36	52	36	52	43	42
	Period of Record: 1953-1963											

Maximum and/or Minimum Anemometer Height: 49 feet 04/53; 13 feet 04/59

ELLINGTON AFB, HOUSTON, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY

FEBRUARY

Hours	Number of Observations	Ocellars <200 Ft and/or Visibility <1/2 MI	Ocellars <2000 Ft and/or Visibility <3 MI	Ocellars <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,835	8.6	31.1	46.7	39.0	4	8.8	2	---	---	9.0	23.5	12.9	1.1	30.5	
03-05	1,836	9.6	35.1	51.7	39.3	4	10.9	3	1.1	---	11.3	20.3	14.2	---	37.4	
06-08	1,835	10.1	39.2	56.4	27.0	4	11.2	3	---	---	12.2	33.4	19.2	1.1	43.4	
09-11	1,835	3.2	32.7	48.0	20.0	2	11.2	2	1.1	---	11.4	20.3	18.5	1.1	32.2	
12-14	1,835	4	26.4	44.7	23.3	5	11.1	2	1.1	---	11.5	11.1	11.8	---	19.4	
15-17	1,836	1.0	22.9	38.0	26.2	7	10.0	1	1.1	---	10.4	10.5	11.8	---	10.9	
18-20	1,836	2.2	25.3	36.0	22.3	5	12	1	1.1	---	8.7	12.3	10.9	1.1	20.3	
21-23	1,836	5.5	28.0	45.6	36.5	7	9.2	1	1.1	---	3.6	18.4	11.9	1.1	26.6	
All Hours 14,684	5.1	30.1	45.3	39.3	5	10.1	3	1.1	---	---	10.5	19.7	13.9	1.1	28.8	

MARCH

APRIL

Hours	Number of Observations	Ocellars <200 Ft and/or Visibility <1/2 MI	Ocellars <2000 Ft and/or Visibility <3 MI	Ocellars <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	1,767	7.0	36.3	47.6	37.6	8	6.4	---	---	---	6.4	21.1	9.2	6.6	27.6	
03-05	1,765	7.4	39.2	51.6	34.0	4	9.3	---	---	---	9.3	27.1	10.1	6.6	32.5	
06-08	1,767	5.7	38.8	53.8	28.2	4	8.5	---	---	1.1	8.5	24.2	16.6	1.1	42.0	
09-11	1,768	6	30.1	47.6	26.0	3	6.8	---	---	---	6.8	9.8	14.8	1.1	22.1	
12-14	1,763	2	20.7	34.7	27.7	6	6.6	---	---	1.1	6.6	4.4	11.4	9	15.0	
15-17	1,767	3	18.7	34.7	29.4	7	5.5	---	---	---	5.5	4.6	9.6	1.1	13.9	
18-20	1,767	1.1	21.6	34.5	34.2	4	5.0	---	---	---	5.0	7.2	10.5	1.1	17.3	
21-23	1,766	3.8	28.3	39.9	39.8	8	6.6	---	---	---	6.6	15.0	9.5	6.6	28.8	
All Hours 14,126	3.3	29.2	44.2	32.2	5	6.9	---	---	---	0	6.9	15.2	11.5	9	24.1	

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

--- indicates that the condition has occurred exactly 0.00 percent of the time. A blank indicates that the data are not available.

ELLINGTON AFB, HOUSTON, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY												JUNE											
Hours	Number of Observations	Cellular >200 Ft and/or Visibility <1/2 MI	Cellular >1000 Ft and/or Visibility <1 MI	Cellular >5000 Ft and/or Visibility <3 MI	Flood Over 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision							
00-02	1,766	1	17.9	36.4	90.5	1.5	0.0	0.0	0.0	0.0	1.7	5.7	12.3	0.0	0.0	18.2							
03-05	1,766	2.0	44.4	44.5	52.9	1.2	4.6	0.0	0.0	0.0	1.6	7.2	13.5	0.0	0.0	31.4							
06-08	1,766	1.4	28.7	58.1	85.2	1.2	4.0	0.0	0.0	0.0	1.7	11.6	15.5	0.0	0.0	35.6							
09-11	1,767	1	15.1	48.2	15.2	1.4	3.6	0.0	0.0	0.0	3.6	3.1	3.6	0.0	0.0	10.0							
12-14	1,767	1	7.9	41.7	26.3	1.4	5.0	0.0	0.0	0.0	5.0	2	5.7	0.0	0.0	12.4							
15-17	1,767	1	8.5	28.0	25.5	2.1	4.9	0.0	0.0	0.0	4.9	1	1.6	0.0	0.0	15.4							
18-20	1,767	1	11.3	23.1	39.1	1.1	3.6	0.0	0.0	0.0	3.6	1.1	7.0	0.0	0.0	13.4							
21-23	1,767	1	13.0	23.3	51.7	1.1	3.7	0.0	0.0	0.0	3.7	2.1	5.2	0.0	0.0	14.3							
All Hours	14,133	5	15.7	36.3	35.0	1.4	1.2	0.0	0.0	0.0	4.2	7.0	9.2	0.0	0.0	15.5							

JULY												AUGUST											
Hours	Number of Observations	Cellular >200 Ft and/or Visibility <1/2 MI	Cellular >1000 Ft and/or Visibility <1 MI	Cellular >5000 Ft and/or Visibility <3 MI	Flood Over 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision							
00-02	1,791	2	2.0	10.3	73.4	5	1.6	0.0	0.0	0.0	1.6	0.5	9.1	0.0	0.0	10.3							
03-05	1,812	2	6.9	9.1	65.7	1.0	2.7	0.0	0.0	0.0	0.7	12.1	11.3	0.0	0.0	19.7							
06-08	1,866	0	10.1	30.1	44.9	6	6.9	0.0	0.0	0.0	2.9	13.2	15.7	0.0	0.0	26.6							
09-11	1,896	1	5.3	42.2	14.5	2.5	5.5	0.0	0.0	0.0	5.5	7	7.3	0.0	0.0	7.9							
12-14	1,899	0	4.5	34.7	11.3	6.9	8.6	0.0	0.0	0.0	6.6	6	4.1	0.0	0.0	4.5							
15-17	1,866	2	2.4	13.6	25.6	3.6	5.1	0.0	0.0	0.0	5.1	12	3.5	0.0	0.0	4.2							
18-20	1,966	1	1.2	6.7	35.0	1.8	2.1	0.0	0.0	0.0	2.1	5	5.0	0.0	0.0	5.5							
21-23	1,791	2	1.5	7.1	63.6	2	1.5	0.0	0.0	0.0	1.5	1.7	7.0	0.0	0.0	7.3							
All Hours	14,657	1	4.3	20.1	31.6	2.2	3.6	0.0	0.0	0.0	3.2	4.0	5.2	0.0	0.0	10.8							

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

ELLINGTON AFB, HOUSTON, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER														OCTOBER													
Hours	Number of Observations	Delights <200 Ft and/or Visibility <1/2 MI	Delights <2000 Ft and/or Visibility <3 MI	Delights <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision											
00-02	1,794	4	7.4	13.7	67.4	3	4.6	...	...	...	4.6	6.5	11.1	...	...	14.7						
03-05	1,791	1.1	14.1	33.3	63.5	1.3	5.7	...	...	...	5.7	16.9	28.0	...	...	36.2						
06-08	1,793	3.8	27.0	51.0	50.1	9	5.7	...	...	...	5.7	29.8	36.0	...	...	48.3						
09-11	1,795	1.1	13.0	40.1	32.4	1.6	7.1	...	...	...	7.1	3.7	14.5	...	...	16.3						
12-14	1,799	...	7.8	25.5	26.9	3.3	8.4	...	...	...	8.4	3.1	4.6	...	...	5.3						
15-17	1,799	2	4.8	15.0	36.0	2.2	6.7	...	...	...	6.7	1.1	3.4	...	...	4.3						
18-20	1,799	1	4.4	9.9	49.3	7	4.7	...	...	...	4.7	9	4.4	...	...	5.1						
21-23	1,795	1	4.8	1.0	64.0	4	4.9	...	...	...	4.9	1.8	6.4	...	...	7.5						
All Hours 14,365	5	10.5	16.4	40.6	1.4	6.0	7.7	12.8	...	...	6.0	7.7	12.8	...	...	16.5							

NOVEMBER														DECEMBER													
Hours	Number of Observations	Delights <200 Ft and/or Visibility <1/2 MI	Delights <2000 Ft and/or Visibility <3 MI	Delights <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision											
00-02	1,800	4.5	22.9	36.6	46.9	6	5.4	...	...	...	5.4	10.7	14.3	...	...	26.5						
03-05	1,800	7.6	25.9	42.6	45.7	4	6.6	...	...	...	6.6	23.3	16.8	...	...	35.0						
06-08	1,799	6.6	31.4	51.4	38.1	4	7.1	...	...	...	7.1	29.3	25.3	...	...	42.6						
09-11	1,799	8	20.5	40.3	33.3	4	7.8	...	...	...	7.8	3.2	10.8	...	...	29.6						
12-14	1,800	...	13.5	36.4	31.2	7	7.2	...	...	...	7.2	2.9	9.6	...	...	10.9						
15-17	1,799	...	12.4	26.9	34.8	4	5.8	...	...	...	5.8	3.4	9.8	...	...	11.6						
18-20	1,800	3	14.6	24.6	43.5	6	6.3	...	...	...	6.3	5.2	10.8	...	...	14.3						
21-23	1,800	1.5	17.7	31.3	40.0	6	6.3	...	...	...	6.3	11.9	12.8	...	...	21.2						
All Hours 14,397	2.8	19.9	36.3	40.2	5	6.6	6.6	12.2	14.8	...	6.6	12.2	14.8	...	...	22.6									

ANNUAL																
Hours	Number of Observations	Delights <200 Ft and/or Visibility <1/2 MI	Delights <2000 Ft and/or Visibility <3 MI	Delights <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Observations to Vision
All Hours 171,995	2.1	18.4	35.0	39.1	1.2	6.3	6.3	11.6	12.0	...	6.3	11.6	12.0	...	...	20.3

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 ... indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

ELLINGTON AFB, HOUSTON, TEXAS WIND ROSES

MAY

Dir.	Speed in Knots							Total	Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-33		
N	.5	.9	1.8	1.1	.5	.1	.0	3.2	7.7
NNE	.8	.8	1.3	1.0	.1	.0	.0	3.5	6.4
N E	.3	.2	1.0	.7	.2	.0	.0	2.4	6.6
ENE	.7	1.2	1.9	1.2	.2	.0	.0	2.8	6.5
E	.7	1.8	2.6	1.9	.6	.1	.0	7.6	6.4
ESE	1.7	2.8	4.6	3.9	1.6	.3	.0	13.3	8.5
SE	1.2	3.6	6.4	6.9	4.3	1.1	.0	20.6	17.8
SSE	1.4	1.1	1.3	3.6	1.1	.0	.0	10.6	17.5
S	.4	.7	.6	.2	.0	.0	.0	3.9	6.7
SSW	.3	.6	.5	.2	.0	.0	.0	2.0	6.3
SW	.3	.4	.4	.3	.0	.0	.0	1.8	6.0
WSW	.3	.4	.4	.3	.0	.0	.0	1.4	6.2
W	.4	.7	1.0	.7	.1	.0	.0	2.9	6.7
WNW	.4	.7	1.0	.7	.1	.0	.0	2.9	6.2
VARBL									
CALM	11.5							11.5	
TOT	20.8	20.6	31.4	23.5	3.8	.6	.0	100.0	7.9
TOTAL NUMBER OF OBSERVATIONS								1113	

JUNE

Dir.	Speed in Knots							Total	Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-33		
N	.4	.8	.7	.2	.1	.0	.0	2.8	6.4
NNE	.4	.8	.7	.2	.1	.0	.0	2.8	6.7
N E	.4	.8	.7	.2	.1	.0	.0	2.8	7.7
NNE	.4	.8	.7	.2	.1	.0	.0	2.8	6.9
E	.6	1.7	2.3	1.6	.4	.0	.0	6.4	8.6
ESE	1.3	3.4	3.7	1.9	.1	.0	.0	17.8	9.0
SE	1.6	2.7	6.3	4.4	.3	.0	.0	17.5	8.5
SSE	1.9	1.6	2.7	1.6	.2	.0	.0	9.3	6.7
S	.4	.7	.6	.2	.0	.0	.0	1.8	6.3
SSW	.4	.7	.6	.2	.0	.0	.0	1.4	6.2
SW	.4	.7	.6	.2	.0	.0	.0	1.4	6.2
WSW	.4	.7	.6	.2	.0	.0	.0	1.4	6.2
W	.4	.7	.6	.2	.0	.0	.0	1.4	6.2
WNW	.4	.7	.6	.2	.0	.0	.0	1.4	6.2
VARBL									
CALM	14.9							14.9	
TOT	24.9	24.7	30.5	37.9	3.9	.2	.0	100.0	6.8
TOTAL NUMBER OF OBSERVATIONS								1360	

JULY

Dir.	Speed in Knots							Total	Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-33		
N	.5	.7	.5	.1	.0	.0	.0	1.8	3.8
NNE	.5	1.0	.8	.3	.0	.0	.0	2.6	7.0
N E	.3	.7	.6	.3	.0	.0	.0	2.0	6.1
NNE	.6	1.1	.9	.4	.0	.0	.0	2.0	6.1
E	.6	1.1	.9	.4	.0	.0	.0	3.9	7.6
ESE	1.2	2.7	2.1	.9	.1	.0	.0	7.1	6.8
SE	1.8	3.6	3.7	1.9	.2	.0	.0	17.5	7.4
SSE	1.1	3.2	3.1	1.0	.1	.0	.0	9.4	7.1
S	1.1	2.8	2.0	.6	.0	.0	.0	4.4	7.0
SSW	.6	1.1	.8	.2	.0	.0	.0	2.9	6.0
SW	.6	1.1	.8	.2	.0	.0	.0	2.9	6.0
WSW	.6	1.1	.8	.2	.0	.0	.0	2.9	6.0
W	.3	.5	.3	.1	.0	.0	.0	1.2	6.9
WNW	.3	.5	.3	.1	.0	.0	.0	1.2	6.9
VARBL									
CALM	21.6							21.6	
TOT	24.5	26.9	29.1	20.0	1.1	.2	.0	100.0	5.5
TOTAL NUMBER OF OBSERVATIONS								1469	

AUGUST

Dir.	Speed in Knots							Total	Wind Speed
	0-3	4-6	7-10	11-16	17-21	22-27	28-33		
N	.9	1.6	.7	.1	.0	.0	.0	3.3	6.3
NNE	.7	2.0	1.8	.4	.1	.0	.0	5.0	6.8
N E	.4	.9	1.3	.6	.1	.0	.0	3.8	7.2
NNE	1.4	.9	1.3	.6	.1	.0	.0	5.0	6.0
E	1.6	1.5	1.9	1.0	.1	.0	.0	6.0	8.0
ESE	1.6	1.5	1.9	1.0	.1	.0	.0	6.0	7.8
SE	1.3	2.7	2.6	1.6	.1	.0	.0	13.4	6.9
SSE	2.1	4.8	4.7	1.6	.2	.0	.0	13.4	6.9
S	1.1	2.7	2.2	.9	.1	.0	.0	5.9	6.2
SSW	1.7	1.4	1.3	.3	.0	.0	.0	4.7	6.6
SW	.9	1.7	1.2	.2	.0	.0	.0	3.1	5.6
WSW	.5	1.0	.4	.1	.0	.0	.0	1.9	5.2
W	.5	.5	.2	.0	.0	.0	.0	1.2	4.7
WNW	.5	.5	.2	.0	.0	.0	.0	1.2	4.7
VARBL									
CALM	19.2							19.2	
TOT	33.4	29.2	26.9	9.3	.9	.1	.0	100.0	5.5
TOTAL NUMBER OF OBSERVATIONS								1487	

KELLY AFB SAN ANTONIO, TEXAS (Lat. 29°23'N, Long. 98°35'W, Elev. 700 ft.)

Kelly AFB is located just southwest of the city of San Antonio. Northwest of the airfield the terrain slopes upward to the Edwards Plateau and to the southeast it slopes downward to the Gulf Coastal Plain. As the airfield is on the edge of the Gulf Coastal Plain this results in a modified subtropical climate, predominately continental during the winter months and maritime during the summer months. The Gulf of Mexico is 120 miles to the southeast.

Predominant southerly and southeasterly winds bring moisture upslope to the Coastal Plains of Texas. This circulation when present, almost always results in night and early morning stratus formation at any time of the year. During the winter months, December through February the nighttime stratus may change to fog by early morning; however, these conditions will usually dissipate before noon with clear skies prevailing a high percentage of the time in the afternoon. An invasion of arctic air will produce low ceilings, freezing rain and occasional snow. Frontal activity is most frequent from November through April. Throughout the year, when surface winds are greater than 30 miles per hour, blowing dust may restrict visibility.

Thunderstorms and heavy rains have occurred in all months of the year. Hail of damaging intensity seldom occurs, but light hail is frequent with springtime thunderstorms.

Tropical storms affect this area from June through October, with the maximum frequency occurring in August.

KELLY AFB (Cont'd.)

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from July 1937-February 1967; with the exception of cloud cover for which data are not available prior to 1946.

KELLY AFB SAN ANTONIO, TEXAS

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS	Temperature (F)												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum	62.4	66.6	73.5	80.6	87.0	92.8	95.8	96.2	90.7	83.0	70.9	64.9	80.3
Mean	51.8	56.0	62.2	70.0	77.0	82.8	85.2	85.3	80.1	71.8	60.0	54.1	69.7
Minimum	41.0	45.2	50.6	59.3	66.7	72.7	74.5	74.2	69.4	60.5	59.0	43.1	58.8
	Record Temperature Extremes												
Maximum	87	96	100	101	102	105	108	106	104	100	93	89	
Minimum	4	9	23	32	46	57	62	59	41	37	21	17	
	Period of Record: 1937-1965												
	Precipitation (Inches)												
Precipitation	1.22	1.97	1.36	2.44	2.96	2.44	1.61	2.23	3.65	2.98	1.67	1.32	25.85
Snowfall*	.2	.1	T	T	T	.0	.0	.0	.0	.0	T	T	.3
(*Hail was included in Snowfall Period of Record; Precipitation 1939-1965 Summary prior to January 1956) Snowfall 1946-1965													
	Surface Winds (Knots) - Record Peak Gusts												
Wind Direction	N	NW	NW	NW	ESE	NNW	ESE	NW	NNW	NNW	NNW	NNW	N
Velocity	55	49	55	57	52	65	49	70	50	52	59	59	69
	Period of Record: 1947-1962, 1964-1965												
Maximum and/or Minimum Anemometer Height:	117 feet 12/42; 13 feet 01/59												

KELLY AFB, SAN ANTONIO, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY														FEBRUARY																	
Hours	Number of Observations	Wetness <200 Ft and/or Visibility <1/2 Mi	Wetness <1000 Ft and/or Visibility <1 Mi	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Wetness <200 Ft and/or Visibility <1/2 Mi	Wetness <1000 Ft and/or Visibility <1 Mi	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	2,787	4.2	28.8	37.4	44.2	1.2	10.7	6	4	11.7	13.2	1	5	5	14.0	00-02	2,539	3.6	34.1	40.3	4	13.5	3	4	0	14.1	13.9	5	4	14.6	
03-05	2,787	8.0	33.1	41.9	40.6	2	12.8	8	5	15.0	17.3	3	3	5	17.9	03-05	2,541	6.1	39.0	36.5	7	15.2	3	5	5	15.7	16.9	3	8	17.9	
06-08	2,790	7.5	35.8	47.0	32.0	0	13.9	5	6	14.8	23.3	3	3	3	26.2	06-08	2,539	7.3	41.1	31.0	4	13.2	2	3	5	15.7	24.9	3.0	9	28.4	
09-11	2,787	3.3	34.0	45.7	28.3	4	10.5	5	5	11.6	20.2	6.3	1.0	26.8	09-11	2,538	2.9	34.5	30.1	2	13.2	2	5	5	13.8	19.9	4.4	1.3	25.1		
12-14	2,788	1	24.1	37.4	31.9	0	8.9	4	3	9.5	15.6	2.6	1.0	14.0	12-14	2,539	5	28.4	39.8	33.1	0	10.6	5	5	5	15.6	10.3	1.8	9	32.9	
15-17	2,789	6	16.3	29.2	34.7	0	7.2	2	3	7.7	7.4	2.1	7	10.0	15-17	2,541	2	17.0	35.1	34.6	2	7.7	1	1	1	7.8	7.4	1.2	1.1	9.6	
18-20	2,787	1.0	16.5	27.4	40.8	2	7.6	3	2	6.0	7.4	1.7	6	9.6	18-20	2,541	6	15.5	26.8	39.1	2	8.7	0	1	1	8.9	7.3	1.4	1.8	9.8	
21-23	2,789	1.9	21.8	22.6	44.3	3	9.1	4	3	9.0	9.5	1.0	8	11.1	21-23	2,539	1.3	23.6	34.6	45.7	3	5.9	5	3	3	10.1	9.2	1.6	6	10.2	
All Hours 22,304	3.4	26.3	37.3	37.0	1	10.1	5	4	0	10.9	13.6	2.2	7	16.2	All Hours 20,317	2.8	28.9	40.0	36.3	3	11.7	1	3	0	11.1	13.7	1.6	9	16.1		

MARCH														APRIL																	
Hours	Number of Observations	Wetness <200 Ft and/or Visibility <1/2 Mi	Wetness <1000 Ft and/or Visibility <1 Mi	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision	Hours	Number of Observations	Wetness <200 Ft and/or Visibility <1/2 Mi	Wetness <1000 Ft and/or Visibility <1 Mi	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	2,691	1.4	32.5	41.5	38.6	3	7.1	0	5	7.2	8.5	1	1	1.6	3.7	00-02	2,664	9	40.0	48.1	32.0	1.3	8.4	5	5	5	6.4	6.9	6	8	8.3
03-05	2,696	2.9	38.7	47.9	35.4	4	9.9	0	5	9.3	13.5	5	3	1.4	15.3	03-05	2,660	1.3	47.1	37.0	25.6	1.4	9.7	5	0	9.7	12.7	9	1.2	14.6	
06-08	2,698	4.1	41.6	54.7	28.7	3	11.2	0	1	11.3	22.1	4.1	3	1.9	28.1	06-08	2,663	1.4	49.0	61.1	13.1	1.8	8.8	5	5	8.8	22.4	4.6	1.4	27.7	
09-11	2,691	8	33.5	46.3	25.8	6	9.4	1	1	9.5	13.6	4.1	1.0	1.0	19.1	09-11	2,664	1.1	35.1	53.0	23.6	1.6	7.1	5	5	7.4	9.7	3.5	1.3	14.2	
12-14	2,690	1	16.7	34.8	34.9	4	6.1	0	1	6.1	4.6	2.1	1	1.5	8.1	12-14	2,661	13.8	39.1	28.2	4	4.3	5	5	4.6	3.6	2.0	1.2	6.8		
15-17	2,688	1	8.5	23.2	33.9	3	4.2	0	0	4.2	3.0	1.6	1	1.6	6.1	15-17	2,661	1	7.0	23.1	29.9	1.8	4.3	5	4.3	2.6	1.5	1.4	5.4		
18-20	2,691	1	7.7	13.6	38.1	4	4.0	0	0	4.0	2.6	1.6	1	1.7	5.9	18-20	2,662	2	8.6	19.7	35.5	1.3	4.2	5	4.8	2.7	1.1	1.3	5.0		
21-23	2,691	2	19.3	27.9	46.9	6	5.1	0	0	5.1	3.2	1.8	1	1.2	5.1	21-23	2,599	3	22.1	34.4	34.6	1.7	6.1	5	6.1	3.0	1.6	1.8	4.3		
All Hours 21,300	1.2	24.8	36.8	35.4	4	7.1	0	0	0	7.2	8.9	1.8	1.8	1.6	12.2	All Hours 20,014	5	27.8	41.9	29.0	1.0	6.8	5	0	6.8	7.9	1.8	1.2	10.8		

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

KELLY AFB, SAN ANTONIO, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

JUNE																
Hours	Number of Observations	Ocellings <200 Ft and/or Visibility <1/2 MI	Ocellings <200 Ft and/or Visibility <3/4 MI	Ocellings <200 Ft and/or Visibility <1 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Restrictions to Vision
00-00	2,699	.2	38.6	19.5	31.9	2.4	6.3	....	....	....	6.3	2.7	.8	....	....	3.3
01-00	2,699	.8	48.3	22.7	28.0	1.6	7.2	....	....	....	7.2	8.8	1.5	....	....	4.0
02-00	2,696	1.1	58.2	65.1	15.5	1.1	5.6	....	....	....	5.6	17.2	5.6	....	....	5.9
03-00	2,695	1.1	24.0	22.4	20.3	0	8.6	....	....	....	4.6	3.8	3.5	....	....	3.4
04-00	2,697	1.1	7.1	34.7	24.0	1.1	3.9	....	....	0	3.9	1.5	2.2	....	....	2.8
05-00	2,693	....	3.5	17.7	20.5	1.4	3.5	....	....	0	3.5	1.6	....	....	....	3.3
06-00	2,693	1.1	4.2	13.6	37.7	2.1	3.7	....	....	0	3.7	1.6	1.7	....	....	2.7
07-00	2,693	1.1	15.8	23.7	39.7	2.5	3.9	....	....	....	3.9	1.6	....	....	....	2.7
All Hours	21,526	.3	28.0	39.0	27.8	1.6	6.9	....	....	0	6.9	4.5	2.2	....	....	3.2

JULY																
Hours	Number of Observations	Ocellings <200 Ft and/or Visibility <1/2 MI	Ocellings <200 Ft and/or Visibility <3/4 MI	Ocellings <200 Ft and/or Visibility <1 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Restrictions to Vision
00-00	2,699	....	14.1	16.5	67.2	2	3.1	....	....	....	3.1	0	3	....	....	1.5
01-00	2,693	1.1	33.6	37.6	42.0	4	1.5	....	....	....	1.5	1.1	4	....	....	2.2
02-00	2,705	....	41.4	48.4	24.3	1	2.2	....	....	....	2.2	2.7	1.9	....	....	2.9
03-00	2,770	....	9.1	39.2	34.3	1	1.8	....	....	....	1.8	3	4	....	....	2.0
04-00	2,768	1.1	1.6	12.6	31.5	5	1.8	....	....	....	1.8	1	2	....	....	2.6
05-00	2,764	....	1.1	4.3	34.1	1.2	3.1	....	....	....	3.1	1.1	3	....	....	3.7
06-00	2,722	....	9	2.8	51.5	9	2.1	....	....	....	2.1	2	1	....	....	2.4
07-00	2,723	....	1.7	3.7	73.0	8	1.2	....	....	....	1.2	0	0	....	....	1.8
All Hours	21,524	.0	16.9	19.5	45.1	5	1.9	....	....	....	1.9	1.6	4	....	....	2.4

AUGUST																
Hours	Number of Observations	Ocellings <200 Ft and/or Visibility <1/2 MI	Ocellings <200 Ft and/or Visibility <3/4 MI	Ocellings <200 Ft and/or Visibility <1 MI	Cloud Cover %/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Restrictions to Vision
00-00	2,715	....	11.8	14.0	68.2	3	3.5	....	....	....	3.5	3	1	....	....	1.5
01-00	2,715	....	28.2	36.8	52.3	3	2.2	....	....	....	2.2	1.1	2	....	....	2.2
02-00	2,713	....	36.3	41.6	33.1	3	2.9	....	....	....	2.9	3.2	2.4	....	....	5.6
03-00	2,718	....	11.1	27.2	37.3	1	2.0	....	....	....	2.0	5	4	....	....	2.0
04-00	2,716	....	2.2	12.6	34.8	7	2.6	....	....	....	2.6	1	....	....	....	2.6
05-00	2,715	....	1.4	4.8	31.9	1.5	3.7	....	....	....	3.7	1	1	....	....	3.7
06-00	2,717	....	1.0	3.0	50.5	1.2	2.4	....	....	....	2.4	0	2	....	....	2.4
07-00	2,716	....	1.6	3.1	72.8	4	1.8	....	....	....	1.8	1	....	....	....	1.8
All Hours	21,725	....	11.7	17.1	47.9	6	2.4	....	....	....	2.4	7	4	....	....	2.4

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 ... indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

KELLY AFB, SAN ANTONIO, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER

Hours	Number of Observations	Clear < 200 Ft and/or Visibility < 3 M	Clear < 400 Ft and/or Visibility < 5 M	Clear < 800 Ft and/or Visibility < 7 M	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	2,695	1	12.4	8.1	6	4.7	0	0	0	1.2	1.2	1.1	0	0	3.5
03-05	2,696	2	22.0	15.1	5	4.5	0	0	0	4.1	3.7	1.1	0	0	9.4
06-08	2,696	4	31.6	33.4	3	4.0	0	0	0	13.5	3.7	1.1	0	0	18.3
09-11	2,694	17.0	33.7	31.4	3	3.7	0	0	0	7.7	2.5	1.5	0	0	11.9
12-14	2,697	17.0	20.5	31.0	4	3.7	0	0	0	1.1	1.1	1.5	0	0	3.7
15-17	2,700	1	3.1	5.3	37.1	1.0	4.9	0	0	1.0	2.8	1.8	0	0	9.8
18-20	2,697	3.0	7.1	22.0	3.5	3.0	0	0	0	5.4	4.1	1.1	0	0	11.6
21-23	2,698	6.2	6.7	66.1	5	4.3	0	0	0	1.1	1.1	1.1	0	0	7.7
All Hours	21,573	1	14.0	22.1	15.5	4.3	0	0	0	3.3	2.4	1.6	0	0	11.0

NOVEMBER

Hours	Number of Observations	Clear < 200 Ft and/or Visibility < 3 M	Clear < 400 Ft and/or Visibility < 5 M	Clear < 800 Ft and/or Visibility < 7 M	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	2,696	1.5	24.2	33.0	4	6.1	0	0	0	1.2	1.3	1.1	0	0	3.6
03-05	2,700	3.5	32.2	42.4	5	7.5	0	0	0	1.2	1.3	1.1	0	0	3.6
06-08	2,694	4.9	33.6	45.1	3	5.9	0	0	0	1.7	1.1	1.1	0	0	4.9
09-11	2,698	1.1	26.8	42.6	35.8	1	6.6	1	0	1.7	1.1	1.1	0	0	4.9
12-14	2,700	14.7	31.5	32.7	2	5.5	0	0	0	5.5	4.9	2.6	0	0	13.0
15-17	2,696	8.7	20.0	42.8	1	5.3	0	0	0	5.3	4.2	1.6	0	0	11.2
18-20	2,695	3	9.0	35.3	11.0	5.2	0	0	0	5.2	3.9	1.7	0	0	11.1
21-23	2,697	5	15.3	23.7	52.7	3	4.3	0	0	1.1	1.1	1.1	0	0	5.3
All Hours	21,576	1.5	22.2	31.7	44.4	6.1	6	0	0	6.3	6.7	2.5	0	0	13.0

ANNUAL

Hours	Number of Observations	Clear < 200 Ft and/or Visibility < 3 M	Clear < 400 Ft and/or Visibility < 5 M	Clear < 800 Ft and/or Visibility < 7 M	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
All Hours	258,765	1.1	22.7	31.3	39.5	6	6.0	1	1	6.2	6.6	1.6	0	0	11.5

OCTOBER

Hours	Number of Observations	Clear < 200 Ft and/or Visibility < 3 M	Clear < 400 Ft and/or Visibility < 5 M	Clear < 800 Ft and/or Visibility < 7 M	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	2,705	3	22.1	26.7	15	4.3	0	0	0	4.3	2.8	1.5	0	0	8.7
03-05	2,705	9	26.1	33.0	15.4	5.1	0	0	0	5.1	7.2	1.6	0	0	13.9
06-08	2,705	1.7	32.5	44.1	6.5	6.2	0	0	0	6.2	12.2	4.6	0	0	23.0
09-11	2,706	1	22.0	37.2	43.7	4	4.8	0	0	4.2	5.7	3.9	0	0	14.5
12-14	2,707	0	6.8	23.1	12.0	4	4.2	0	0	3.0	1.6	1.9	0	0	6.5
15-17	2,706	1	3.7	11.7	12.9	6	3.7	0	0	3.7	3.2	1.7	0	0	9.3
18-20	2,707	1	3.0	3.0	66.1	1	5.1	0	0	3.2	3.3	1.0	0	0	8.3
21-23	2,708	2	3.2	13.1	56.7	1	3.6	0	0	3.6	1.1	1.8	0	0	6.3
All Hours	22,256	1	15.5	24.2	34.7	5	5.1	0	0	5.4	5.3	1.7	0	0	11.7

DECEMBER

Hours	Number of Observations	Clear < 200 Ft and/or Visibility < 3 M	Clear < 400 Ft and/or Visibility < 5 M	Clear < 800 Ft and/or Visibility < 7 M	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
00-02	2,729	3.7	25.2	35.6	13.1	12.2	1	1.2	0	10.3	12.0	1.6	0	0	13.2
03-05	2,727	6.8	31.7	42.7	14.3	12.4	0	0	0	12.6	16.3	1.6	0	0	16.9
06-08	2,728	2.1	33.8	41.7	22.5	12.5	1.2	0	0	12.6	22.0	3.4	0	0	25.3
09-11	2,729	2.7	31.0	43.5	34.0	1	9.8	1	0	10.0	10.0	6.7	0	0	26.4
12-14	2,728	5	11.9	34.0	36.2	0	7.6	0	0	7.7	6.0	2.8	0	0	11.4
15-17	2,725	6	13.6	27.3	32.1	0	6.5	0	0	6.5	6.6	2.1	0	0	9.0
18-20	2,727	8	14.1	23.5	46.9	2	7.9	0	0	7.9	6.7	1.1	0	0	11.1
21-23	2,726	1.7	12.8	31.2	57.2	1	2.5	1	0	2.7	5.9	1.8	0	0	9.8
All Hours	22,223	3.1	23.7	34.7	42.1	1	9.5	1	0	9.7	12.3	2.3	0	0	14.7

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.

--- indicates that the condition has occurred exactly 0.00 percent of the time.

A blank indicates that the data are not available.

KELLY AFB, SAN ANTONIO, TEXAS WIND ROSES

JANUARY

Dir.	Speed in Knots					Total	Mean Speed	Dir.	Speed in Knots					Total	Mean Speed	
	0-3	4-6	7-10	11-16	17-21				22-27	28-33	34-40	41-47	48-55			56
N	1.6	2.2	3.4	2.7	1.9	3	0	N	1.6	1.6	3.3	5.7	4.4	0	10.5	9.7
NE	1.2	2.4	3.5	1.6	1.5	2	0	NE	1.2	2.3	3.7	1.7	1.1	0	8.5	9.6
E	1.3	1.7	2.7	1.5	1.1	0	0	E	1.2	2.1	2.0	2.6	1.1	0	7.1	8.2
ESE	1.5	1.0	1.0	1.4	1.1	0	0	ESE	1.5	1.5	1.8	1.9	1.2	0	6.0	6.6
SE	1.2	1.7	2.2	1.9	1.2	0	0	SE	1.5	1.2	2.7	1.8	1.2	0	6.4	8.2
SSE	1.2	1.8	2.1	1.8	1.1	0	0	SSE	1.5	1.7	2.5	1.8	1.2	0	6.4	8.4
S	1.0	1.2	1.4	1.4	1.0	0	0	S	1.0	1.7	2.5	1.0	1.2	0	6.5	7.1
SSW	1.0	1.2	1.4	1.4	1.0	0	0	SSW	1.3	1.6	1.9	1.3	1.0	0	4.9	7.1
SW	1.2	1.5	1.2	1.0	1.1	0	0	SW	1.1	1.4	1.4	1.1	1.0	0	1.1	7.3
WSW	1.7	1.8	1.5	1.2	1.1	0	0	WSW	1.6	1.6	1.5	1.3	1.1	0	2.1	7.5
W	2.4	2.1	1.1	1.6	1.1	1	0	W	1.3	1.4	1.3	1.9	1.3	0	5.3	8.0
WSW	1.2	1.9	1.3	1.1	1.1	1	0	WSW	1.7	1.5	1.3	1.0	1.5	0	5.2	9.2
CALM	17.1							CALM	10.4						10.4	
TOT	31.6	22.9	26.6	13.8	3.7	1.3	1	TOT	26.4	22.1	30.7	16.0	3.7	1	100.0	7.1

FEBRUARY

Dir.	Speed in Knots					Total	Mean Speed	Dir.	Speed in Knots					Total	Mean Speed	
	0-3	4-6	7-10	11-16	17-21				22-27	28-33	34-40	41-47	48-55			56
N	1.6	2.2	3.4	2.7	1.9	3	0	N	1.6	1.6	3.3	5.7	4.4	0	10.5	9.7
NE	1.2	2.4	3.5	1.6	1.5	2	0	NE	1.2	2.3	3.7	1.7	1.1	0	8.5	9.6
E	1.3	1.7	2.7	1.5	1.1	0	0	E	1.2	2.1	2.0	2.6	1.1	0	7.1	8.2
ESE	1.5	1.0	1.0	1.4	1.1	0	0	ESE	1.5	1.5	1.8	1.9	1.2	0	6.0	6.6
SE	1.2	1.7	2.2	1.9	1.2	0	0	SE	1.5	1.2	2.7	1.8	1.2	0	6.4	8.2
SSE	1.2	1.8	2.1	1.8	1.1	0	0	SSE	1.5	1.7	2.5	1.8	1.2	0	6.4	8.4
S	1.0	1.2	1.4	1.4	1.0	0	0	S	1.0	1.7	2.5	1.0	1.2	0	6.5	7.1
SSW	1.0	1.2	1.4	1.4	1.0	0	0	SSW	1.3	1.6	1.9	1.3	1.0	0	4.9	7.1
SW	1.2	1.5	1.2	1.0	1.1	0	0	SW	1.1	1.4	1.4	1.1	1.0	0	1.1	7.3
WSW	1.7	1.8	1.5	1.2	1.1	0	0	WSW	1.6	1.6	1.5	1.3	1.1	0	2.1	7.5
W	2.4	2.1	1.1	1.6	1.1	1	0	W	1.3	1.4	1.3	1.9	1.3	0	5.3	8.0
WSW	1.2	1.9	1.3	1.1	1.1	1	0	WSW	1.7	1.5	1.3	1.0	1.5	0	5.2	9.2
CALM	17.1							CALM	10.4						10.4	
TOT	31.6	22.9	26.6	13.8	3.7	1.3	1	TOT	26.4	22.1	30.7	16.0	3.7	1	100.0	7.1

MARCH

Dir.	Speed in Knots					Total	Mean Speed	Dir.	Speed in Knots					Total	Mean Speed	
	0-3	4-6	7-10	11-16	17-21				22-27	28-33	34-40	41-47	48-55			56
N	1.1	1.5	2.2	2.3	1.0	3	1	N	1.1	1.5	2.0	1.6	1.6	0	6.9	10.2
NE	1.2	1.9	3.0	1.5	1.3	0	0	NE	1.2	1.4	2.4	1.3	1.3	0	6.3	8.4
E	1.6	2.2	2.6	1.9	1.1	0	0	E	1.5	2.1	1.9	1.9	1.1	0	7.7	9.1
ESE	1.7	1.9	3.0	1.1	1.3	0	0	ESE	1.7	2.4	2.6	2.1	1.5	1	10.5	8.9
SE	1.7	2.6	2.0	2.4	1.1	0	0	SE	1.6	2.4	2.0	2.4	1.7	0	8.1	9.7
SSE	1.9	1.7	2.7	1.5	1.2	0	0	SSE	1.7	1.5	2.9	1.3	1.8	0	6.7	8.4
S	1.3	1.4	1.9	1.3	1.1	0	0	S	1.2	1.3	1.1	1.1	1.0	0	1.1	7.0
SSW	1.3	1.4	1.9	1.3	1.1	0	0	SSW	1.2	1.3	1.1	1.1	1.0	0	1.1	7.0
SW	1.6	1.8	2.3	1.1	1.0	0	0	SW	1.1	1.2	1.3	1.1	1.0	0	1.6	7.8
WSW	1.3	1.4	1.4	1.2	1.1	0	0	WSW	1.2	1.2	1.4	1.2	1.0	0	1.1	8.7
W	1.9	1.9	1.4	1.2	1.1	0	0	W	1.7	1.7	1.7	1.6	1.2	0	2.9	8.2
WSW	1.7	1.1	1.9	1.6	1.2	0	0	WSW	1.5	1.7	1.7	1.5	1.3	0	2.9	9.1
CALM	10.8							CALM	8.4						8.4	
TOT	28.4	20.3	32.6	17.9	5.3	1.2	2	TOT	17.6	19.4	35.7	20.7	5.2	1	100.0	8.3

APRIL

Dir.	Speed in Knots					Total	Mean Speed	Dir.	Speed in Knots					Total	Mean Speed	
	0-3	4-6	7-10	11-16	17-21				22-27	28-33	34-40	41-47	48-55			56
N	1.1	1.5	2.2	2.3	1.0	3	1	N	1.1	1.5	2.0	1.6	1.6	0	6.9	10.2
NE	1.2	1.9	3.0	1.5	1.3	0	0	NE	1.2	1.4	2.4	1.3	1.3	0	6.3	8.4
E	1.6	2.2	2.6	1.9	1.1	0	0	E	1.5	2.1	1.9	1.9	1.1	0	7.7	9.1
ESE	1.7	1.9	3.0	1.1	1.3	0	0	ESE	1.7	2.4	2.6	2.1	1.5	1	10.5	8.9
SE	1.7	2.6	2.0	2.4	1.1	0	0	SE	1.6	2.4	2.0	2.4	1.7	0	8.1	9.7
SSE	1.9	1.7	2.7	1.5	1.2	0	0	SSE	1.7	1.5	2.9	1.3	1.8	0	6.7	8.4
S	1.3	1.4	1.9	1.3	1.1	0	0	S	1.2	1.3	1.1	1.1	1.0	0	1.1	7.0
SSW	1.3	1.4	1.9	1.3	1.1	0	0	SSW	1.2	1.3	1.1	1.1	1.0	0	1.1	7.0
SW	1.6	1.8	2.3	1.1	1.0	0	0	SW	1.1	1.2	1.3	1.1	1.0	0	1.6	7.8
WSW	1.3	1.4	1.4	1.2	1.1	0	0	WSW	1.2	1.2	1.4	1.2	1.0	0	1.1	8.7
W	1.9	1.9	1.4	1.2	1.1	0	0	W	1.7	1.7	1.7	1.6	1.2	0	2.9	8.2
WSW	1.7	1.1	1.9	1.6	1.2	0	0	WSW	1.5	1.7	1.7	1.5	1.3	0	2.9	9.1
CALM	10.8							CALM	8.4						8.4	
TOT	28.4	20.3	32.6	17.9	5.3	1.2	2	TOT	17.6	19.4	35.7	20.7	5.2	1	100.0	8.3

KELLY AFB, SAN ANTONIO, TEXAS WIND ROSES

SEPTEMBER

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.4	1.6	1.9	1.1	.3	6.5	1.7
NNE	1.2	1.7	2.0	1.2	.2	7.8	1.8
NNE	1.0	1.5	1.8	1.0	.1	6.5	1.6
E	1.0	1.4	1.7	1.0	.1	5.7	1.4
ESE	1.0	1.4	1.7	1.0	.1	5.7	1.4
E	1.0	1.4	1.7	1.0	.1	5.7	1.4
ESE	1.0	1.4	1.7	1.0	.1	5.7	1.4
SE	1.0	1.4	1.7	1.0	.1	5.7	1.4
SSE	1.0	1.4	1.7	1.0	.1	5.7	1.4
S	1.0	1.4	1.7	1.0	.1	5.7	1.4
SSW	1.0	1.4	1.7	1.0	.1	5.7	1.4
SW	1.0	1.4	1.7	1.0	.1	5.7	1.4
WSW	1.0	1.4	1.7	1.0	.1	5.7	1.4
W	1.0	1.4	1.7	1.0	.1	5.7	1.4
WNW	1.0	1.4	1.7	1.0	.1	5.7	1.4
NW	1.0	1.4	1.7	1.0	.1	5.7	1.4
NNW	1.0	1.4	1.7	1.0	.1	5.7	1.4
N	1.0	1.4	1.7	1.0	.1	5.7	1.4
VARBL	15.7					15.7	
CALM							
TOT	30.2	34.6	38.4	11.2	1.3	100.0	6.1

TOTAL NUMBER OF OBSERVATIONS: 21573

OCTOBER

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.8	2.2	2.6	1.3	.3	11.0	2.7
NNE	1.5	2.0	2.4	1.2	.2	9.3	2.3
NNE	1.0	1.5	1.8	1.0	.1	6.4	1.6
E	1.0	1.5	1.8	1.0	.1	6.4	1.6
ESE	1.0	1.5	1.8	1.0	.1	6.4	1.6
E	1.0	1.5	1.8	1.0	.1	6.4	1.6
ESE	1.0	1.5	1.8	1.0	.1	6.4	1.6
SE	1.0	1.5	1.8	1.0	.1	6.4	1.6
SSE	1.0	1.5	1.8	1.0	.1	6.4	1.6
S	1.0	1.5	1.8	1.0	.1	6.4	1.6
SSW	1.0	1.5	1.8	1.0	.1	6.4	1.6
SW	1.0	1.5	1.8	1.0	.1	6.4	1.6
WSW	1.0	1.5	1.8	1.0	.1	6.4	1.6
W	1.0	1.5	1.8	1.0	.1	6.4	1.6
WNW	1.0	1.5	1.8	1.0	.1	6.4	1.6
NW	1.0	1.5	1.8	1.0	.1	6.4	1.6
NNW	1.0	1.5	1.8	1.0	.1	6.4	1.6
N	1.0	1.5	1.8	1.0	.1	6.4	1.6
VARBL	16.2					16.2	
CALM							
TOT	31.5	34.6	31.1	10.9	1.5	100.0	6.0

TOTAL NUMBER OF OBSERVATIONS: 22271

NOVEMBER

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.9	2.7	3.0	2.5	.9	11.3	3.0
NNE	1.5	2.0	2.0	1.8	.6	7.9	2.1
NNE	1.0	1.5	1.8	1.4	.4	6.5	1.7
E	1.0	1.5	1.8	1.4	.4	6.5	1.7
ESE	1.0	1.5	1.8	1.4	.4	6.5	1.7
E	1.0	1.5	1.8	1.4	.4	6.5	1.7
ESE	1.0	1.5	1.8	1.4	.4	6.5	1.7
SE	1.0	1.5	1.8	1.4	.4	6.5	1.7
SSE	1.0	1.5	1.8	1.4	.4	6.5	1.7
S	1.0	1.5	1.8	1.4	.4	6.5	1.7
SSW	1.0	1.5	1.8	1.4	.4	6.5	1.7
SW	1.0	1.5	1.8	1.4	.4	6.5	1.7
WSW	1.0	1.5	1.8	1.4	.4	6.5	1.7
W	1.0	1.5	1.8	1.4	.4	6.5	1.7
WNW	1.0	1.5	1.8	1.4	.4	6.5	1.7
NW	1.0	1.5	1.8	1.4	.4	6.5	1.7
NNW	1.0	1.5	1.8	1.4	.4	6.5	1.7
N	1.0	1.5	1.8	1.4	.4	6.5	1.7
VARBL	17.1					17.1	
CALM							
TOT	32.6	34.0	26.5	13.0	3.0	100.0	6.3

TOTAL NUMBER OF OBSERVATIONS: 21583

DECEMBER

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.8	2.3	3.0	2.5	.9	11.5	3.0
NNE	1.4	2.0	2.6	2.0	.7	8.6	2.3
NNE	1.0	1.5	1.8	1.3	.4	6.4	1.7
E	1.0	1.5	1.8	1.3	.4	6.4	1.7
ESE	1.0	1.5	1.8	1.3	.4	6.4	1.7
E	1.0	1.5	1.8	1.3	.4	6.4	1.7
ESE	1.0	1.5	1.8	1.3	.4	6.4	1.7
SE	1.0	1.5	1.8	1.3	.4	6.4	1.7
SSE	1.0	1.5	1.8	1.3	.4	6.4	1.7
S	1.0	1.5	1.8	1.3	.4	6.4	1.7
SSW	1.0	1.5	1.8	1.3	.4	6.4	1.7
SW	1.0	1.5	1.8	1.3	.4	6.4	1.7
WSW	1.0	1.5	1.8	1.3	.4	6.4	1.7
W	1.0	1.5	1.8	1.3	.4	6.4	1.7
WNW	1.0	1.5	1.8	1.3	.4	6.4	1.7
NW	1.0	1.5	1.8	1.3	.4	6.4	1.7
NNW	1.0	1.5	1.8	1.3	.4	6.4	1.7
N	1.0	1.5	1.8	1.3	.4	6.4	1.7
VARBL	19.8					19.8	
CALM							
TOT	34.1	23.1	26.3	11.0	2.7	100.0	5.9

TOTAL NUMBER OF OBSERVATIONS: 22322

ANNUAL

Dir.	Speed in Knots					Total	Mean Wind Speed
	0-3	4-6	7-10	11-16	17-21		
N	1.2	1.5	2.1	1.5	.5	7.0	1.9
NNE	1.0	1.3	2.3	1.6	.4	6.4	1.7
NNE	1.0	1.3	1.6	1.0	.3	5.0	1.3
E	1.0	1.3	1.6	1.0	.3	5.0	1.3
ESE	1.0	1.3	1.6	1.0	.3	5.0	1.3
E	1.0	1.3	1.6	1.0	.3	5.0	1.3
ESE	1.0	1.3	1.6	1.0	.3	5.0	1.3
SE	1.0	1.3	1.6	1.0	.3	5.0	1.3
SSE	1.0	1.3	1.6	1.0	.3	5.0	1.3
S	1.0	1.3	1.6	1.0	.3	5.0	1.3
SSW	1.0	1.3	1.6	1.0	.3	5.0	1.3
SW	1.0	1.3	1.6	1.0	.3	5.0	1.3
WSW	1.0	1.3	1.6	1.0	.3	5.0	1.3
W	1.0	1.3	1.6	1.0	.3	5.0	1.3
WNW	1.0	1.3	1.6	1.0	.3	5.0	1.3
NW	1.0	1.3	1.6	1.0	.3	5.0	1.3
NNW	1.0	1.3	1.6	1.0	.3	5.0	1.3
N	1.0	1.3	1.6	1.0	.3	5.0	1.3
VARBL	13.6					13.6	
CALM							
TOT	26.4	22.4	34.2	15.0	3.0	100.0	6.9

TOTAL NUMBER OF OBSERVATIONS: 24263

SHEPPARD AFB WICHITA FALLS, TEXAS (Lat. 33°58'N, Long. 98°29'W, Elev. 1030 ft.)

Sheppard AFB is located in the extreme northern portion of a large section of Texas called the Central Lowlands or, more commonly, the Osage Plains. It lies east of the escarped edge of the flat High Plains, north of the rough lands of Central Texas, and west of the West Coastal Plain. The general elevation of the land is from 900 to 2000 feet and consists generally of a series of north-south oriented hilly belts or east-facing escarpments and parallel intervening broad valley troughs.

Some 400 miles to the south and southeast lies the Gulf of Mexico, which is a major factor in local weather patterns, acting as a source of low level warm moist air. This flow off the Gulf can produce stratus during the morning hours or render the lower levels of the atmosphere unstable enough to cause afternoon and evening thunderstorms.

From November to March much of the significant weather is associated with cold frontal passages which occur on an average of every three to six days. Very slow moving or quasi-stationary cold fronts produce some of the poorest flying weather. Low ceilings and visibilities, accompanied by occasional thundershowers and various types of precipitation, may persist for several days. Rapid moving cold fronts are generally preceded by a squall line, especially in the spring and fall.

Thunderstorms can occur at any time during the year, but the most severe storms are associated with the spring squall lines. This is the period most favorable for tornadoes, large hail and strong gusty winds.

SHEPPARD AFB (Cont'd.)

While strong gusty winds occur quite frequently, severe dust storms are rare. Advection or radiation fog can be expected with light winds and may restrict the visibility for several hours. Normally ceilings and visibilities will improve within a few hours after sunrise.

The following data, except for the Temperature and Precipitation Summary, are based on twenty-four hourly observations from May 1942-March 1944 and August 1946-July 1967; with the exception of cloud cover for which data are not available prior to 1946.

SHEPPARD AFB WICHITA FALLS, TEXAS

Temperature, Precipitation, and Wind (Peak Gust) Summary

MONTHLY MEANS

	Temperature (°F)												Annual
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
Maximum	53.0	58.3	65.3	76.5	83.4	92.2	96.8	97.4	88.7	78.4	64.9	55.5	76.0
Mean	41.2	46.4	52.7	64.3	72.1	81.0	85.3	85.3	76.8	66.2	52.8	44.3	64.2
Minimum	29.0	34.0	39.6	51.6	60.4	69.4	73.3	72.7	64.5	53.6	40.4	32.6	51.9

Record Temperature Extremes

Maximum	87	88	98	99	104	109	111	113	107	101	89	88
Minimum	-12	-1	6	28	36	51	57	54	42	25	14	7
	Period of Record: 1942-1944, 1946-1967											

MONTHLY MEANS

Precipitation (Inches)

Precipitation	.93	.99	1.47	3.27	5.00	3.25	2.29	1.68	2.66	2.37	1.45	1.40	26.76
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Snowfall*

2.3	1.7	.9	T	T	T	.0	.0	.0	.0	.0	.3	.7	5.8
(*Hail was included in Snowfall Period of Record: Precipitation 1942-1944, 1946 Summary prior to January 1956) Snowfall 1946-1967													

Surface Winds (Knots) - Record Peak Gusts

Wind Direction	NNW	NW	W	SSE	SW	W	N	N	NW	SW	N	NW
Velocity	53	56	60	60	59	63	56	70	50	51	46	47
	Period of Record: 1951-1954, 1957-1967											

Maximum and/or Minimum Anemometer Height:

47 feet 09/56, 21 feet 04/61

SHEPPARD AFB, WICHITA FALLS, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

JANUARY															FEBRUARY														
Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <1/2 MI	Occurrences <2000 Ft and/or Visibility <3 MI	Occurrences <4000 Ft and/or Visibility <6 MI	Cloud Cover >1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Show and/or Sleet	Hail	Total Occurrences of	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of	Obstructions to Vision												
00-02	1,948	2.2	13.5	19.2	55.1	.3	4.6	1.1	3.1	....	8.6	7.1	....	.3	5	7.9	7.9									
03-05	1,993	2.8	14.1	20.4	55.2	.2	5.1	1.6	2.2	....	8.7	9.6	....	.2	3	10.0	10.0									
06-08	1,993	2.9	16.8	23.2	46.8	.1	4.1	2.5	3.4	....	9.7	9.7	.7	.1	13	10.4	10.4											
09-11	1,948	1.4	15.8	21.7	39.9	.1	3.5	2.3	3.6	....	6.8	6.8	1.0	....	5	10.2	10.2										
12-14	1,947	0.5	14.3	20.7	40.6	....	3.0	1.6	2.8	....	6.2	6.0	.5	....	10	7.1	7.1									
15-17	1,944	0.4	11.9	18.8	44.4	....	3.2	1.6	2.2	....	6.5	4.7	.4	....	11	6.1	6.1									
18-20	1,992	0.7	10.6	17.1	51.0	.2	3.3	1.8	2.5	....	6.8	4.8	.1	.2	7	5.8	5.8											
21-23	1,993	1.6	11.3	16.8	57.8	.1	3.1	1.7	2.7	....	6.8	5.2	....	.2	7	6.0	6.0									
All Hours 15,996	1.6	13.5	19.7	49.2	.1	3.7	1.8	2.8	....	7.5	7.0	.3	.1	1.6	8.0	8.0												

MARCH															APRIL														
Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <1/2 MI	Occurrences <2000 Ft and/or Visibility <3 MI	Occurrences <4000 Ft and/or Visibility <6 MI	Cloud Cover >1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Show and/or Sleet	Hail	Total Occurrences of	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of	Obstructions to Vision												
00-02	1,993	1.1	10.7	18.2	58.1	.7	4.5	.5	.7	....	5.5	4.5	.1	.1	2.8	7.4	7.4											
03-05	1,990	1.2	14.0	22.8	54.6	.7	4.6	.7	.7	....	5.0	6.4	.1	....	1.9	8.4	8.4										
06-08	1,991	1.2	15.6	25.4	45.8	.7	5.8	.4	1.0	.1	7.0	0.5	.9	....	1.7	10.9	10.9											
09-11	1,993	.5	15.0	24.5	48.9	.6	5.2	.3	1.1	....	6.5	5.3	.7	.1	1.8	7.8	7.8											
12-14	1,993	.1	11.1	23.1	43.1	.2	4.6	.1	.9	....	5.5	2.7	.8	.1	2.9	6.4	6.4											
15-17	1,992	....	9.6	19.9	43.2	.3	3.7	.2	.6	....	4.4	2.6	.4	....	4.1	7.2	7.2									
18-20	1,993	.3	10.0	18.0	47.7	.7	4.2	.1	.6	....	4.9	3.1	.4	.1	4.6	8.1	8.1											
21-23	1,993	.7	9.3	16.5	58.0	.8	4.0	.2	.6	....	4.7	3.4	.1	....	3.5	7.0	7.0										
All Hours 15,618	.6	12.0	21.0	49.2	.6	4.6	.3	.8	.0	5.6	4.6	.4	.0	2.9	7.9	7.9													

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

SHEPPARD AFB, WICHITA FALLS, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

MAY														JUNE																			
Hours	Number of Observations	Cells < 200 Ft and/or Visibility < 3.00 Mi	Cells < 400 Ft and/or Visibility < 4 Mi	Cells < 800 Ft and/or Visibility < 6 Mi	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision	Number of Observations	Cells < 200 Ft and/or Visibility < 3.00 Mi	Cells < 400 Ft and/or Visibility < 4 Mi	Cells < 800 Ft and/or Visibility < 6 Mi	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision	
00-02	1,943	.3	6.6	12.3	51.6	4.9	6.5	....	....	.1	8.5	2.2	.2	....	.3	2.6	00-02	1,990	.1	3.3	4.2	64.1	5.2	5.6	....	....	....	5.6	.2	.2	....	.1	.5
03-05	1,992	.6	9.2	16.3	46.0	3.4	8.4	....	....	.1	8.4	4.1	.2	....	.5	4.9	03-05	1,990	.1	4.2	8.5	59.4	3.5	5.6	....	....	....	5.6	1.2	.2	....	.1	1.3
06-08	1,992	.2	12.6	21.2	40.6	2.3	7.2	....	....	....	7.2	4.9	.9	....	.7	6.3	06-08	1,990	.1	7.0	12.1	49.8	1.7	4.0	....	....	....	4.0	2.1	.7	....	.1	2.7
09-11	1,990	....	12.7	22.1	39.9	1.4	6.9	....	....	....	6.9	1.9	.6	....	.7	3.0	09-11	1,990	.1	5.1	13.3	51.7	1.0	3.2	....	....	....	3.2	.6	.4	....	.3	1.2
12-14	1,993	.1	7.2	17.8	41.0	1.8	6.1	....	....	....	6.1	.6	.2	....	.3	1.0	12-14	1,990	.1	12.2	9.4	49.7	.7	2.8	....	....	....	2.8	.1	.2	....	.3	.6
15-17	1,991	....	5.0	12.3	43.4	2.3	5.3	....	....	.1	5.3	.4	.3	....	.4	1.0	15-17	1,991	....	11.3	5.6	36.3	1.6	2.4	....	....	....	2.4	.2	.1	....	.4	.6
18-20	1,998	....	5.0	9.6	46.2	3.6	5.2	....	....	.1	5.2	.8	.5	....	.6	1.8	18-20	1,988	....	11.3	3.9	39.7	2.3	3.1	....	....	....	3.1	.1	.3	....	.3	.3
21-23	1,991	.1	6.1	9.9	51.4	4.7	6.5	....	....	....	6.5	.9	....	....	.3	1.2	21-23	1,888	.2	2.2	5.4	43.6	3.7	4.2	....	....	....	4.2	.3	.5	....	.1	.8
All Hours 15,610		.2	8.0	15.2	45.2	3.1	6.8	....	....	.0	6.8	2.0	.3	....	.5	2.7	All Hours 15,113		1.1	3.4	8.1	56.7	2.5	3.9	....	....	....	3.9	.6	.3	....	.2	1.0

JULY														AUGUST																		
Hours	Number of Observations	Cells < 200 Ft and/or Visibility < 3.00 Mi	Cells < 400 Ft and/or Visibility < 4 Mi	Cells < 800 Ft and/or Visibility < 6 Mi	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision	Number of Observations	Cells < 200 Ft and/or Visibility < 3.00 Mi	Cells < 400 Ft and/or Visibility < 4 Mi	Cells < 800 Ft and/or Visibility < 6 Mi	Cloud Cover 13/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Obstructions to Vision
00-02	1,993	.1	1.2	2.3	69.6	2.0	3.2	....	....	....	3.2	....	....	....	....	....	00-02	1,949	....	.7	1.0	71.6	1.3	2.8	....	....	....	2.8	....	....	.1	.1
03-05	1,993	....	1.6	3.1	63.2	1.4	3.7	....	....	....	3.7	.4	.3	....	.5	....	03-05	1,990	....	1.0	2.3	76.9	1.7	3.2	....	....	....	3.2	....	....	.1	.5
06-08	1,993	.1	2.5	4.8	50.8	2.1	4.8	....	....	....	4.8	1.2	.9	....	.1	2.1	06-08	1,992	....	2.3	3.9	57.9	1.3	3.9	....	....	....	3.9	1.0	.4	....	.4
09-11	1,992	....	2.2	5.5	51.9	1.1	3.4	....	....	....	3.4	.4	.2	....	.6	....	09-11	1,994	....	2.5	5.3	66.4	.3	2.7	....	....	....	2.7	.3	.1	....	.4
12-14	1,993	....	.8	5.2	45.9	1.1	2.7	....	....	....	2.7	.1	.4	....	.1	.5	12-14	1,995	....	.9	4.3	56.8	.8	2.4	....	....	....	2.4	.1	....	.2	.2
15-17	1,993	....	.3	2.3	52.1	1.8	2.8	....	....	....	2.8	.1	.1	....	.1	.2	15-17	1,995	....	.3	2.0	51.1	1.2	2.3	....	....	....	2.3	....	.1	.1	.2
18-20	1,993	....	.6	1.2	59.9	2.2	2.4	....	....	....	2.4	....	.1	....	.2	.3	18-20	1,995	.1	.4	.9	64.0	1.4	1.6	....	....	....	1.6	....	.2	.3	
21-23	1,993	....	.5	.9	69.5	1.6	1.8	....	....	....	1.8	....	.1	....	.1	.1	21-23	1,995	....	.1	.6	72.7	.9	1.7	....	....	....	1.7	.1	.1	.2	
All Hours 15,663		1.2	3.1	57.8	1.7	3.1	....	....	....	....	3.1	.3	.2	....	.1	.5	All Hours 15,625		1.0	2.6	62.9	1.1	2.6	....	....	....	2.6	.2	.1	....	.1	.4

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

SHEPPARD AFB, WICHITA FALLS, TEXAS

Percentage Frequencies of Occurrence of Specified Weather Conditions

SEPTEMBER													OCTOBER												
Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <1/2 MI	Occurrences <2000 Ft and/or Visibility <1 MI	Occurrences <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision									
00-02	1,947	.1	4.7	8.2	73.3	1.5	4.4	4.4	1.1	1.5	1.5	1.1	1.1	1.1	1.1	1.5									
03-05	1,948	.5	6.7	9.5	70.5	1.0	3.9	3.9	1.0	2.1	2.1	1.9	1.9	1.9	1.9	2.1									
06-08	1,990	.5	8.9	12.8	60.5	1.2	5.7	5.7	1.4	4.3	4.3	4.2	4.2	4.2	4.2	4.3									
09-11	1,990	.1	4.6	14.9	58.0	.6	4.3	4.3	2.7	2.7	2.7	2.4	2.4	2.4	2.4	2.7									
12-14	1,949	----	5.4	11.0	53.7	.5	3.5	3.5	1.1	1.7	1.7	1.4	1.4	1.4	1.4	1.7									
15-17	1,946	----	3.0	6.2	58.2	.6	4.4	4.4	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.1									
18-20	1,990	----	2.7	5.2	62.2	1.7	4.1	4.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1									
21-23	1,947	----	3.5	6.9	72.6	1.4	3.6	3.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1									
All Hours 15,587		.1	5.5	9.3	64.4	1.1	4.2	4.2	1.1	1.5	1.5	1.3	1.3	1.3	1.3	1.5									

NOVEMBER													DECEMBER												
Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <1/2 MI	Occurrences <2000 Ft and/or Visibility <1 MI	Occurrences <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision									
00-02	1,990	1.0	8.5	11.9	66.4	.7	5.1	5.1	1.1	1.4	1.4	3.8	3.8	3.8	3.8	4.3									
03-05	1,949	1.1	10.3	16.1	66.0	.6	5.0	5.0	1.2	1.2	1.2	5.7	5.7	5.7	5.7	6.3									
06-08	1,990	1.4	12.3	10.9	57.5	.6	5.0	5.0	1.3	1.3	1.3	8.0	8.0	8.0	8.0	9.4									
09-11	1,990	.7	12.0	18.5	53.1	.7	5.5	5.5	1.4	1.4	1.4	5.5	5.5	5.5	5.5	7.4									
12-14	1,949	.1	9.9	16.9	51.2	.2	4.4	4.4	1.3	1.3	1.3	3.0	3.0	3.0	3.0	4.9									
15-17	1,949	.1	7.8	13.4	53.9	.2	4.2	4.2	1.2	1.2	1.2	2.9	2.9	2.9	2.9	5.1									
18-20	1,990	.1	7.0	11.0	62.8	.1	4.4	4.4	1.2	1.2	1.2	3.5	3.5	3.5	3.5	5.0									
21-23	1,948	.3	7.4	11.4	66.3	.3	4.5	4.5	1.4	1.4	1.4	3.6	3.6	3.6	3.6	4.4									
All Hours 15,589		.7	9.4	14.9	59.6	.4	4.9	4.9	1.3	1.5	1.5	4.5	4.5	4.5	4.5	5.9									

ANNUAL																
Hours	Number of Observations	Occurrences <200 Ft and/or Visibility <1/2 MI	Occurrences <2000 Ft and/or Visibility <1 MI	Occurrences <4000 Ft and/or Visibility <6 MI	Cloud Cover 1/10	Thunder (With or Without Precipitation)	Rain and/or Drizzle	Freezing Rain and/or Freezing Drizzle	Snow and/or Sleet	Hail	Total Occurrences of Precipitation	Fog	Smoke and/or Haze	Blowing Snow	Dust (Blowing and/or Suspended)	Total Occurrences of Obstructions to Vision
All Hours 185,204		.6	8.2	14.0	54.7	1.1	4.6	4.6	1.3	1.6	1.6	3.5	3.5	3.5	3.5	4.6

0.0 indicates that the condition has occurred less than 0.05 percent of the time, but more than 0.00 percent of the time.
 --- indicates that the condition has occurred exactly 0.00 percent of the time.
 A blank indicates that the data are not available.

