Selected Meteorological Data for an Arid Site Near Beatty, Nye County, Nevada, Calendar Year 1986

By James L. Wood and Jeffrey M. Fischer

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	*By*	*To obtain*
kilometer (km)	0.6214	mile
kilopascal	0.1450	pounds per square inch
meter (m)	3.281	feet
meter per second (m/s)	3.281	feet per second
millimeter (mm)	0.03937	inch
millimeter per hour (mm/hr)	25.40	inch per hour
watt per square meter (W/m^2)	0.005290	British Thermal Unit per square foot by minute

For temperature, degrees Celsius (°C) can be converted to degrees Fahrenheit (°F) by using the formula °F = [(1.8)(°C)] + 32.

SEA LEVEL

In this report, "sea level" refers to the National Geodetic Vertical Datum of 1929 NGVD of 1929, formerly called Sea-Level Datum of 1929), which is derived from a general adjustment of the first-order leveling networks of both the United States and Canada.

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ABSTRACT

Selected meteorological data were collected at a study site adjacent to a low-level radioactive-waste burial facility near Beatty, Nevada, for calendar year 1986. Data were collected in support of an ongoing study to estimate the potential for downward movement of radionuclides into the unsaturated sediments beneath waste-burial trenches at the facility. The data include air temperature, relative humidity, vapor pressure, incident solar radiation, windspeed, wind direction, and precipitation. The data are summarized in tables and graphs.

A discussion of the instrumentation used at the site is presented. Included in the discussion are the type of sensors, their reported accuracy, and mounting height of each sensor.

The minimum hourly air temperature was -6.4 °C, in February. The maximum air temperature was 42.6 °C, in August. Monthly wind direction patterns are shown in a series of diagrams in which wind direction is summed over 10-degree arcs from hourly averaged data. Total precipitation for 1986 was 75.5 mm, with almost 80 percent occurring during January-April and November-December.

INTRODUCTION

Meteorological data were collected near the low-level radioactive-waste burial facility near Beatty, Nev., in support of an ongoing study to estimate the potential for downward movement of radionuclides into the unsaturated sediments beneath waste-burial trenches at the facility (figure 1B). This report presents and summarizes meteorological data collected for calendar year 1986. The meteorological data collected include air temperature, relative humidity, vapor pressure, incident solar radiation, windspeed, wind direction, and precipitation.

The waste-burial facility on the Amargosa Desert, 17 km southeast of Beatty and 169 km northwest of Las Vegas, Nev. (figure 1A), has been operating since 1962. The disposal facility was the first commercially operated in the United States. Wastes at the facility are emplaced in 2- to 15-m deep trenches and covered by back filling with previously excavated materials. The Amargosa Desert in the vicinity of the waste-burial facility is a northwest trending valley about 13 km wide. Vegetation is sparse, with creosote bush (*Larrea tridentata*) being the dominant species.

The study site is situated in one of the most arid parts of the United States. Precipitation is highly variable. Mean annual precipitation is about 114 mm at Beatty (altitude, 1,005 m above sea level), and 74 mm at Lathrop Wells (altitude, 817 m), 30 km southeast of the site (Nichols, 1987, p. 15). No perennial streams are within 16 km of the site and the dry bed of Amargosa River is the principal drainage channel (figure 1A).

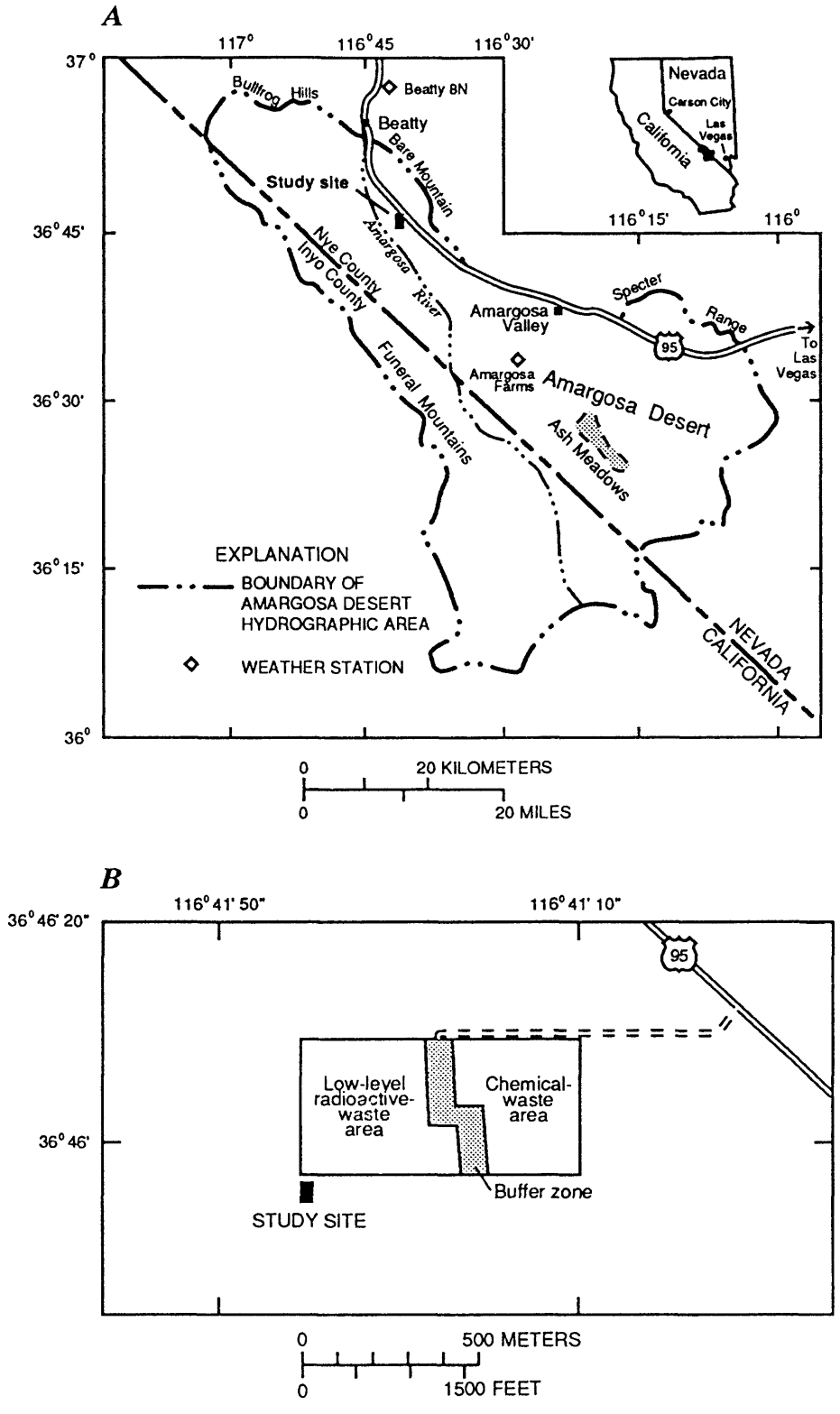

FIGURE 1.--Location of study site and adjacent waste-disposal facility.

A detailed view of part of the study site is shown in figure 2. The site is enclosed with anti-personnel fencing and is patrolled by security from the adjacent commercial waste-disposal facility; this provides protection against vandalism. In addition to the meteorological station data, unsaturated-zone data are collected from three neutron probe access tubes and from sensors installed at several depths in a monitoring shaft (figure 2). An undisturbed area is maintained on one side of the shaft site where no foot or vehicle traffic is allowed except on a designated foot path. A description of this unsaturated-zone monitoring is presented in Morgan and Fischer (1984).

INSTRUMENTATION

Meteorological sensors consisting of an air temperature and relative humidity sensor, silicon pyranometer, anemometer, wind vane, and tipping-bucket rain gage were installed in the fall of 1984. All sensors were factory calibrated prior to installation. All instruments are mounted on a Campbell Scientific, Inc. (CSI) CM10 tripod. Both the anemometer and wind vane are mounted 3.4 m above land surface. The air temperature/relative humidity (RH) probe is mounted inside of a CSI model 041 sensor shield 1.7 m above land surface. The tipping-bucket rain gage is mounted 2.2 m above land surface and the silicon pyranometer 3.7 m above land surface. All heights are approximate. The CSI CM10 tripod is located approximately 40 m from a CSI CR21 datalogger housed in a shed on the site (figure 2).

The anemometer is a model 014A supplied by MET ONE[1] with an accuracy of 1.5 percent and a threshold of 0.45 m/s. The wind vane is a model 024A also from MET ONE and has a specified accuracy of ± 5 degrees and a threshold of 0.45 m/s. The temperature/RH probe is a CSI model 207 with a temperature accuracy of ± 0.4 °C in a range of -33 °C to 48 °C and a RH accuracy of ± 5 percent over a 12- to 100-percent RH range. The tipping-bucket rain gage is a Weathermeasure model P-501 with a sensitivity and resolution of 0.25 mm and an accuracy of 0.5 percent at 12.7 mm/hr. The silicon pyranometer is a LICOR LI200S calibrated against an Eppley Precision Spectral Pyranometer.

SELECTED METEOROLOGICAL DATA

Measurements from all meterological instruments, except the tipping-bucket rain gage, were made every 60 seconds. These measurements were used by the CR21 datalogger to compute hourly averages for air temperature, relative humidity, solar radiation, windspeed, wind direction, and a standard deviation of the wind direction. Precipitation was only recorded during events at 5-minute intervals and totaled for a day. The hourly averaged and totalized precipitation values were automatically retrieved from the datalogger to a Prime minicomputer using telecommunications and a computer program called ADAREPS, which is an acronym for Automatic DAta REtrieval and Processing System (John Walker, U.S. Geological Survey, written commun., 1986). Data from the datalogger were retrieved twice daily. A cassette tape attached to the datalogger was used as a backup to the automatic data retrieval system. The hourly averaged values were used to compute daily means, maximums, and minimums for air temperature, relative humidity, solar radiation, windspeed, and wind direction, and are summarized in table 3 at the end of this report. Only 15 days during 1986 had missing hourly values, and of these, only December 24-27, and December 31 had more than 2 hours of missing data.

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[1] All sensor specifications supplied by manufacturers.

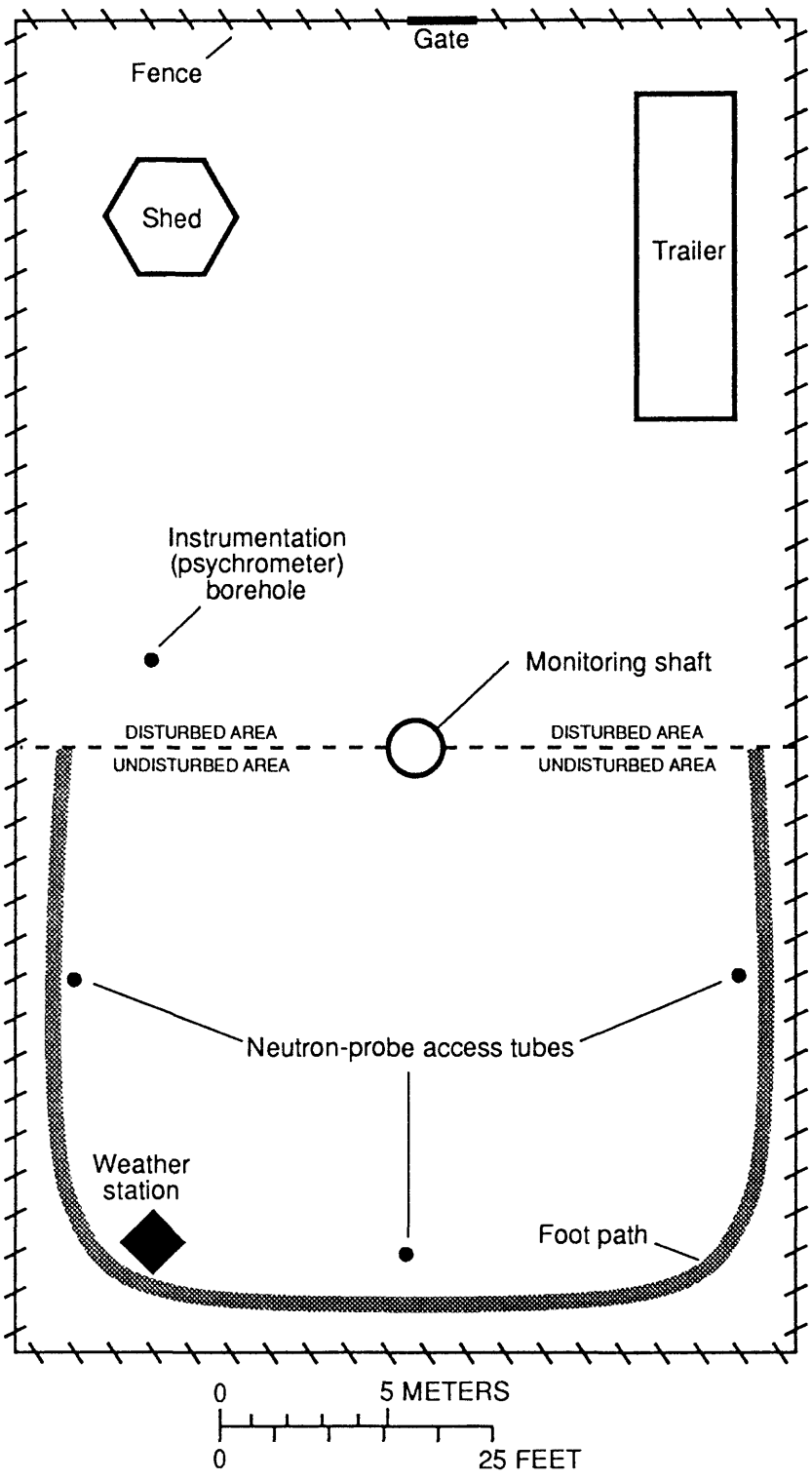

FIGURE 2.--Location of weather station and related unsaturated-zone monitoring shaft, psychrometer borehole, and neutron-probe access tubes at study site. The monitoring shaft is used to measure water potentials and the neutron-probe access tubes are used to measure moisture content. Location of study site is shown in figure 1.

Air Temperature

Hourly averaged values of maximum and minimum air temperatures for each month together with a monthly mean value are listed in table 1. The minimum temperature was -6.4 °C in February and the maximum was 42.6 °C in August.

Both seasonal and daily temperature fluctuations are large in the vicinity of the study area. Differences between hourly averaged maximum and minimum temperatures commonly exceeded 20 °C. Maximum, mean, and minimum daily temperatures for 1986 are shown in figure 3.

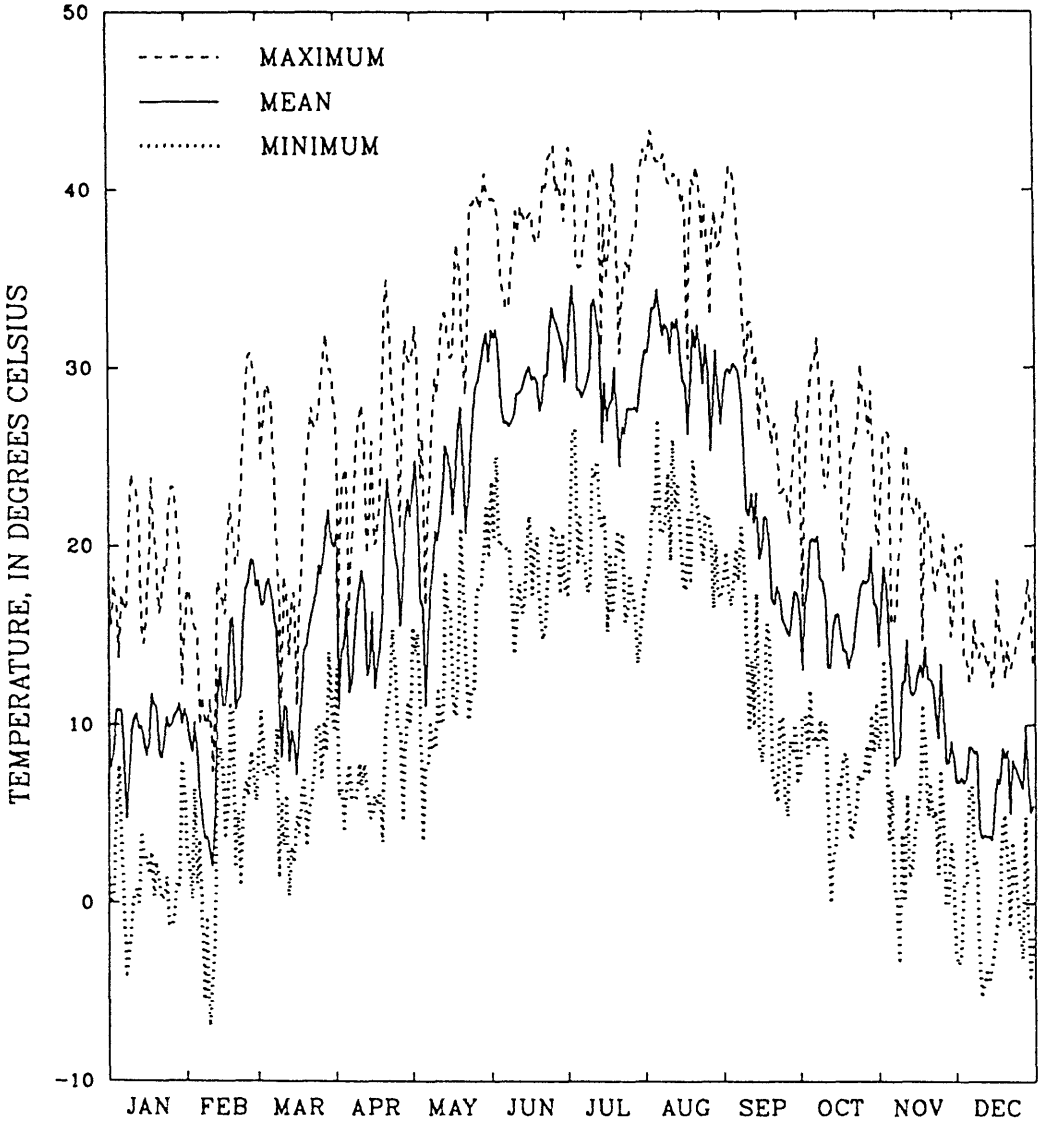

FIGURE 3.--Maximum, mean, and minimum daily air temperatures computed from hourly averaged values for 1986.

TABLE 1.--*Maximum, minimum, and mean monthly air temperatures at study site for 1986.*

[Times are 24-hour notation and referenced to Pacific Standard Time. Temperatures are degrees Celsius.]

Month	Maximum[1]	Day/time	Minimum[1]	Day/time	Mean
January	23.5	18/1600	-3.4	8/0800	9.5
February	30.5	26/1600	-6.4	10/0800	11.0
March	31.3	28/1500	1.4	13/0800	15.1
April	34.3	21/1500	4.3	4/0600	17.0
May	39.3	25/1700	4.5	5/0600	23.5
June	41.9	26/1500	14.7	10/0600	29.7
July	41.8	2/1600	15.1	29/0600	29.3
August	42.6	4/1600	17.3	28/0600	30.8
September	40.6	5/1400	5.3	26/0700	21.9
October	31.0	8/1400	1.1	13/0700	16.6
November	26.1	4/1600	-2.6	9/0700	12.0
December	19.5	3/1500	-4.5	11/0200	6.5

[1] Hourly averaged values.

Relative Humidity

Relative humidity is the ratio of the amount of water vapor in the air at a specific temperature to the maximum amount of water vapor the air can hold at that temperature and is expressed as a percent. Mean, maximum, and minimum daily relative humidity values computed from hourly averaged values are listed in table 3. Mean daily relative humidity values are shown in figure 4. Mean values range from about 12 percent (the lower limit of the sensor range) during the drier summer months to almost 90 percent during winter storm events.

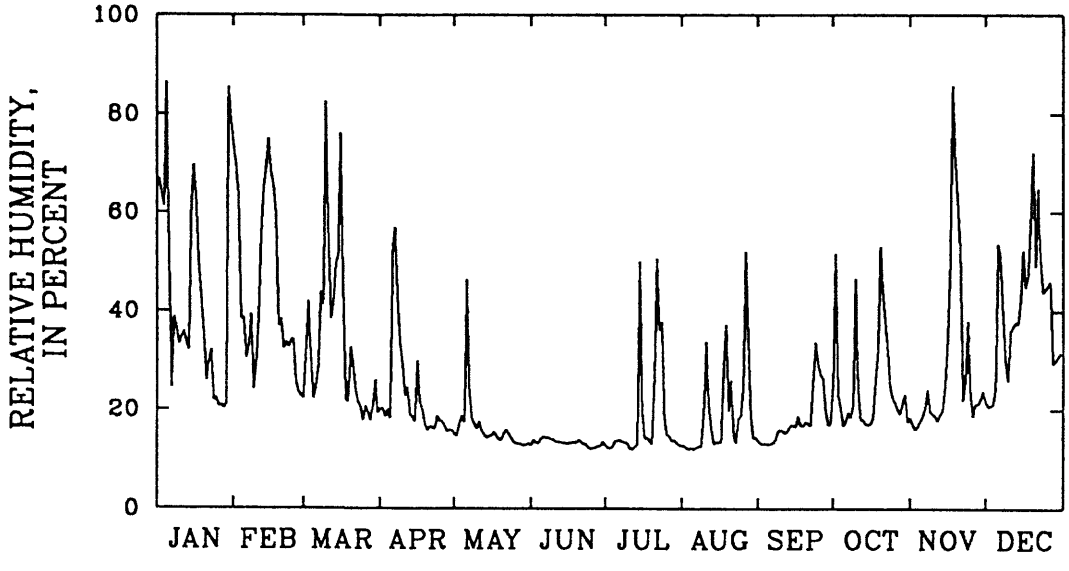

FIGURE 4.--Mean daily relative humidity computed from hourly averaged values for 1986.

Vapor Pressure

Water vapor content of air can be expressed in terms of the partial pressure exerted by the water vapor, or vapor pressure (Campbell, 1986, p. 21). Mean, maximum, and minimum daily values of vapor pressure are listed in table 3. Mean daily vapor pressures computed from hourly averaged values of temperature and relative humidity are shown in figure 5.

Vapor pressure at a given hourly ambient air temperature was determined by first calculating the saturation vapor pressure at that particular temperature, which by definition is the highest concentration of water vapor that can exist in equilibrium with a plane, free water surface at a given temperature. This value was obtained by using the formula (Lowe, 1977):

$$E_s = a_0+a_1T+a_2T^2+a_3T^3+a_4T^4+a_5T^5+a_6T^6, \quad (1)$$

where E_s = saturation vapor pressure, in millibars;

T = temperature, in degrees Celsius; and

a_i (i=0,1,...6) = numerical constants for each term of the polynomial.

This result was then divided by 10 to convert from millibars to kilopascals. Ambient vapor pressure was determined by multiplying the hourly saturation vapor pressure by the hourly averaged relative humidity.

Hourly vapor pressures ranged from a maximum of 2.11 kilopascals in August to a minimum of 0.12 kilopascal in November. Vapor pressures have generally higher base pressures during the warmer summer months and lower base pressures coinciding with cooler winter conditions (figure 5). Vapor-pressure peaks throughout the year generally correlate with precipitation listed in table 2 and shown in figure 9C.

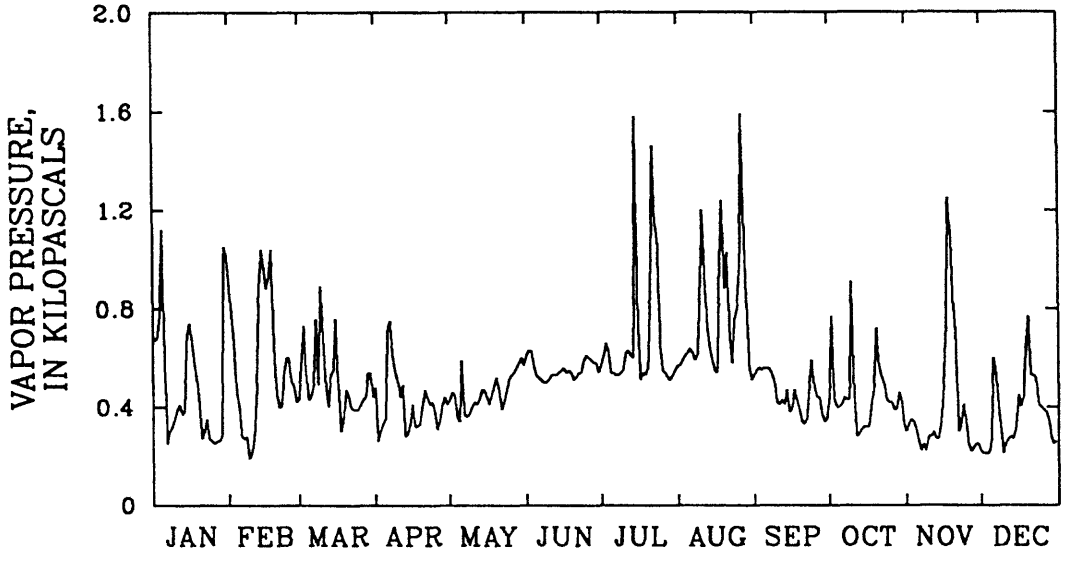

FIGURE 5.--Mean daily vapor pressure computed from hourly averaged values for 1986.

Solar Radiation

Daily averaged and maximum daily incident solar radiation computed from hourly averaged values are listed in table 3. Incident solar radiation (short wave) is the amount of radiation that reaches the earth without interception. Generally, daily mean and maximum daily radiation were highest between May and September, and lowest between November and February coinciding with seasonal cycles.

Maximum solar radiation values computed from hourly averaged values for each day are shown in figure 6. The daily maximum solar radiation values ranged from 180 W/m² on December 4 to 1,054 W/m² on June 4.

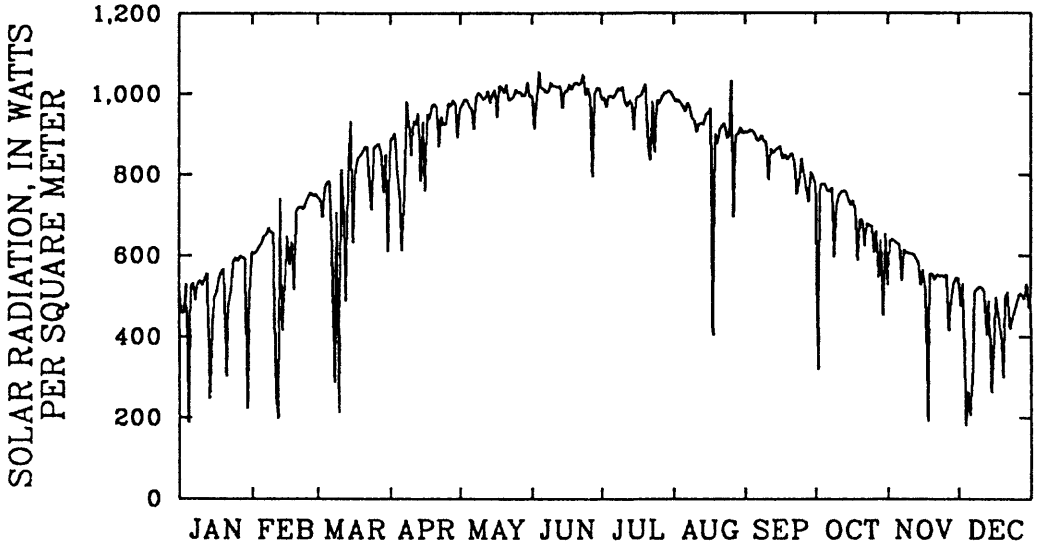

FIGURE 6.--Maximum daily solar radiation computed from hourly averaged values for 1986.

Windspeed and Wind Vector Direction

Mean, maximum, and minimum daily values of windspeed computed from hourly averaged values are listed in table 3. Mean daily windspeeds are shown in figure 7. Mean daily windspeeds, for days with 24 values, ranged from a minimum of 1.6 m/s to a maximum of 10.5 m/s. Hourly averages ranged from less than 1 m/s to more than 13 m/s.

Mean daily wind vector direction (degrees Azimuth) and wind vector magnitude (meters per second) presented in table 3 were determined from hourly wind vector direction and magnitude values using the following equations (from Campbell Scientific Inc., 1984, p. B-6 to B-10):

$$\text{Average daily wind vector direction in degrees} = \arctan(\bar{x}/\bar{y}) \qquad (2)$$

where $\bar{x}$ = the sum of each hourly wind vector magnitude multiplied by the sine of the hourly wind vector direction and divided by the number of hourly values; $\bar{x}$ is positive to the east; and

$\bar{y}$ = the sum of each hourly wind vector magnitude multiplied by the cosine of the hourly wind vector direction and divided by the number of hourly values; $\bar{y}$ is positive to the north.

$$\text{Average daily wind vector magnitude} = \sqrt{\bar{x}^2 + \bar{y}^2} \quad . \tag{3}$$

Average daily wind vector direction in table 3 ranges from 0 to 360 degrees Azimuth (increasing degrees clockwise from north). The wind vector direction calculated from equation 2 was transformed into degrees Azimuth on the basis of $\bar{x}$ and $\bar{y}$. For positive $\bar{x}$ and $\bar{y}$, the value calculated from equation 2 is the average daily wind vector direction in degrees Azimuth. For negative values of $\bar{y}$, the calculated value of wind vector direction is added to 180 degrees, and for negative value of $\bar{x}$ and positive value of $\bar{y}$, the calculated value is added to 360 degrees. Because equation 2 cannot be used when $\bar{y}$ is zero, the average wind vector direction was set to 90 degrees Azimuth for positive values of $\bar{x}$ and 270 degrees Azimuth for negative values of $\bar{x}$.

Wind vector directions for each month are summarized in diagrams called wind roses (figure 8). The diagrams were determined by: (1) summing the number of hourly wind vector directions recorded during each month over 10-degree areas, (2) then dividing the sums by the total number of hourly values for each month, and (3) multiplying by 100 to obtain percent.

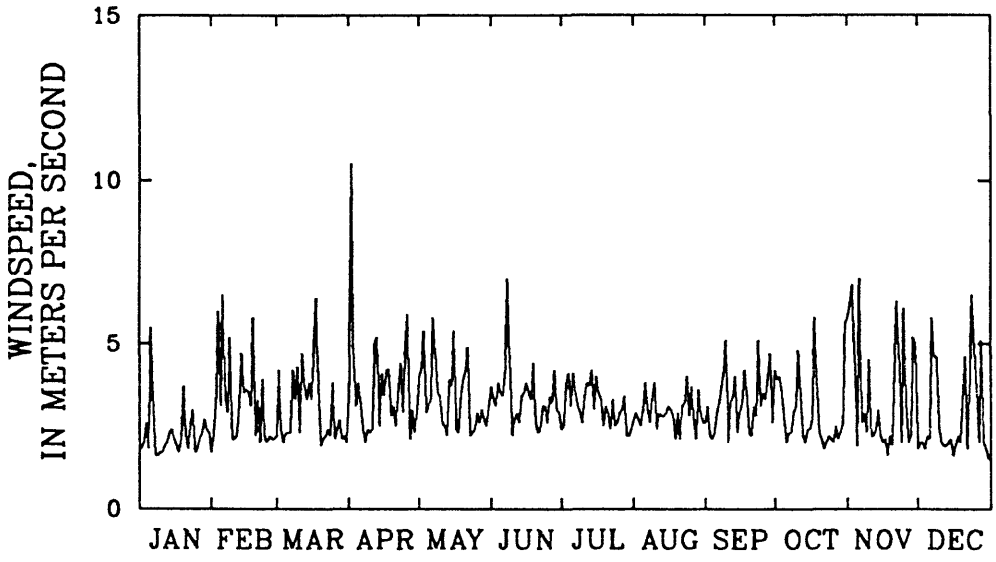

FIGURE 7.--Mean daily wind speeds computed from hourly averaged values for 1986.

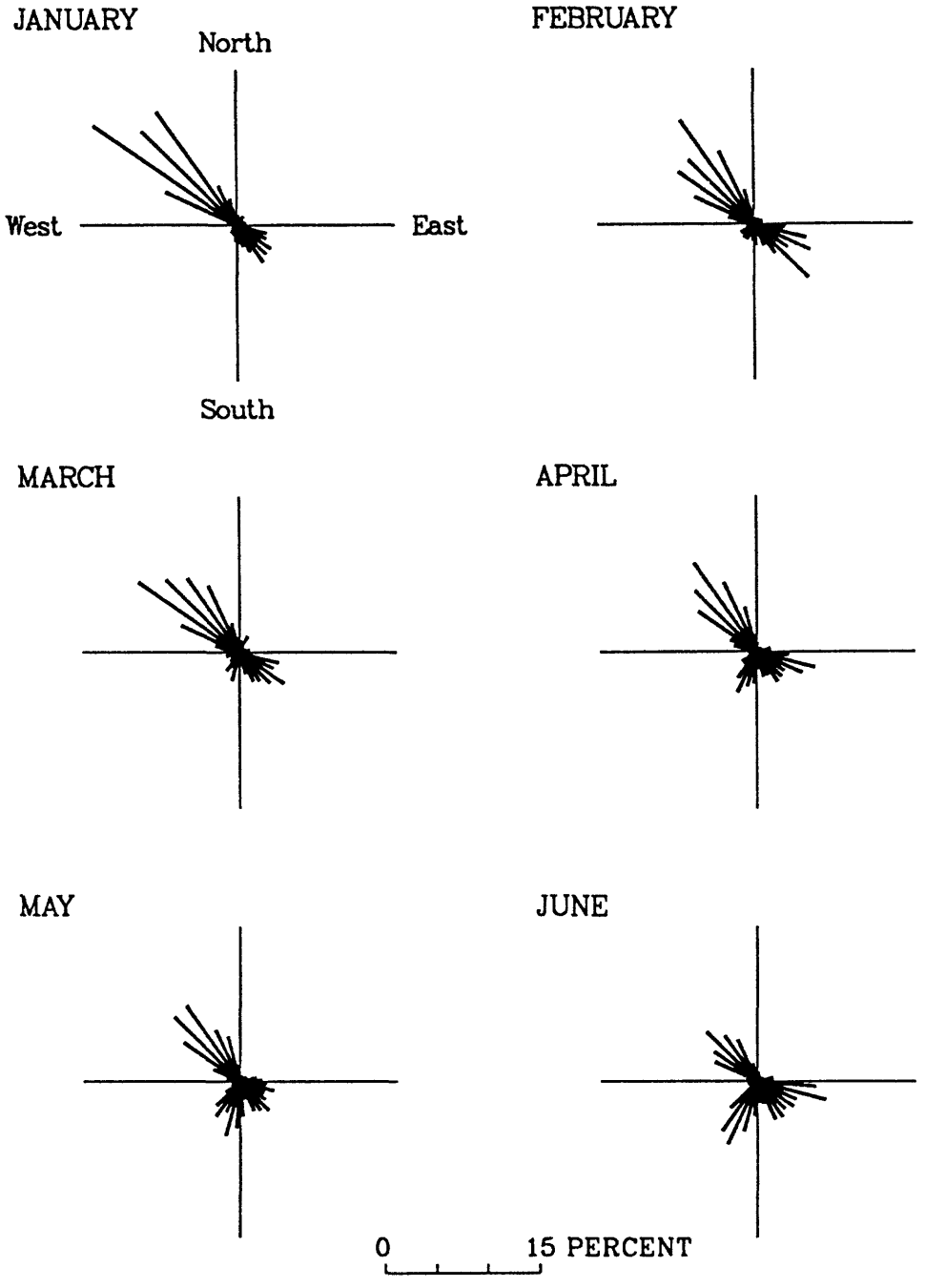

FIGURE 8.--Diagrams showing percentage of time wind is from a given direction for each month during 1986. Wind direction is summed over 10-degree arcs from hourly averaged data.

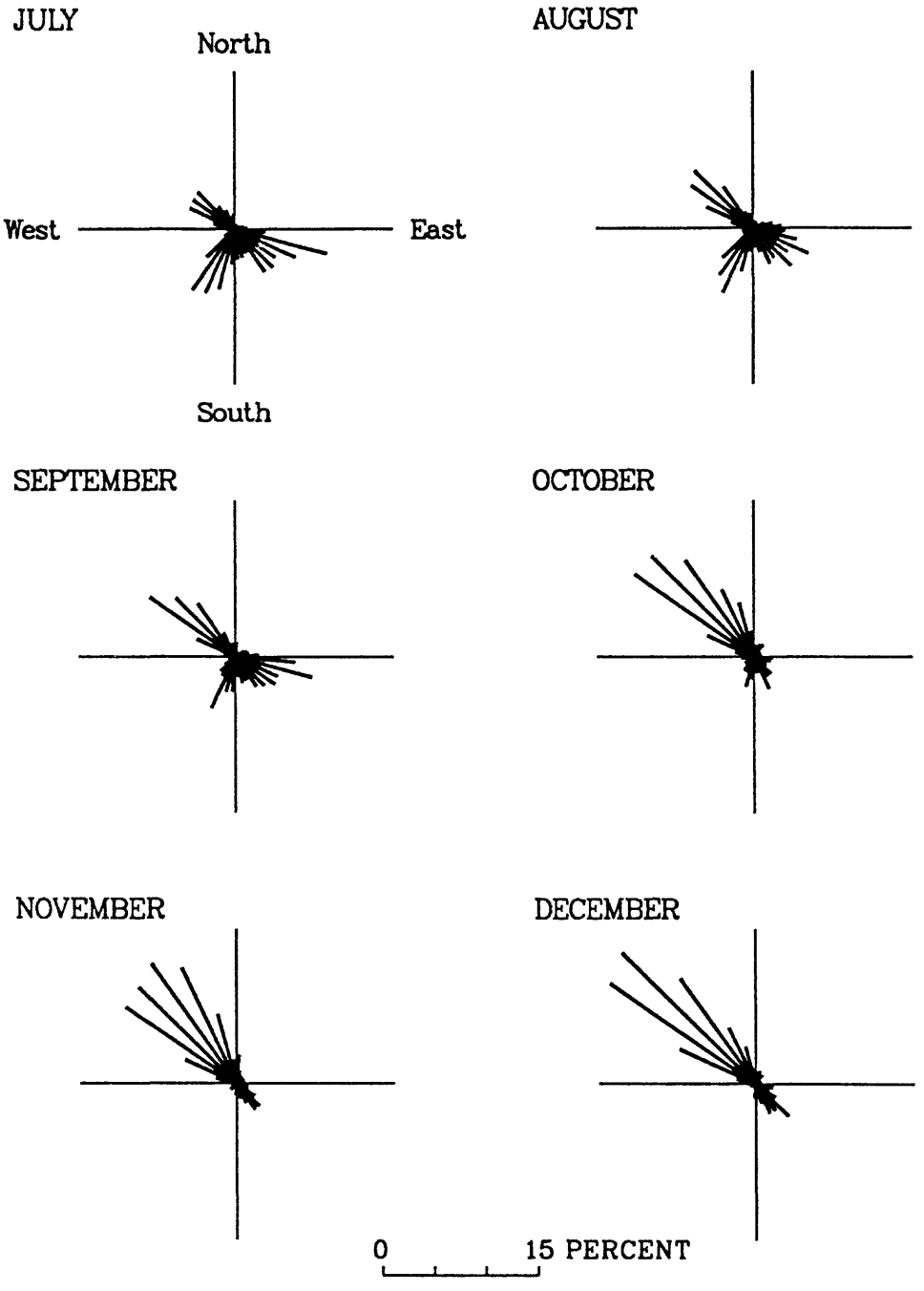

FIGURE 8.--Continued.

Trends shown in figure 8 indicate definite interseasonal variability in wind direction for 1986. Wind at the study site was predominantly from the northwest during January through March, but wind direction gradually shifted to the southeast and southwest during April through June. The wind was predominantly from the southeast and southwest during July. Wind began to gradually shift back to the northwest during August and September until the predominant direction was again from the northwest during October through December.

Precipitation

Due to the infrequent nature of precipitation at the study site, precipitation is not included in table 3, but is summarized in table 2 and figure 9. Total measured precipitation for the year was 75.5 mm.

Monthly precipitation values measured at the study site are shown in figure 9A. Monthly precipitation ranged from 14.7 mm in January to zero in June. Typically, most precipitation occurred during the winter months, and was lowest during the summer. Summer precipitation was from localized convective storms, whereas winter events were from regional frontal systems.

Figure 9B compares monthly precipitation at the study site (altitude 847 m) and two National Oceanic and Atmospheric Administration (NOAA) sites. One of the these sites is designated Beatty 8N and is situated 12.9 km north of Beatty (37° 00′ N., 116° 43′ W.) at an altitude of 1,007 m (figure 1); the other is Amargosa Farms, which is about 35 km southeast of the study site (36° 34′ N., 116° 28′ W.) at an altitude of 747 m. Monthly values vary onsiderably between sites.

Daily precipitation totals are shown in figure 9C and table 2. The largest events occurred during the winter months. Daily precipitation exceeded 5 mm on four days--one each in January, February, November, and December. Summer storms are usually of short duration but can be intense. Only one summer storm produced as much as 4 mm of precipitation, and that event occurred on July 21.

TABLE 2.--*Daily total precipitation at study site for 1986. All unlisted dates had no precipitation.*

Month	Day	Total precipitation (millimeters)	Month	Day	Total precipitation (millimeters)
January	5	3.8	May	6	1.8
January	29	.2	July	15	2.2
January	30	10.5	July	21	4.0
January	31	.2	July	23	2.2
February	3	.2	August	10	1.0
February	14	2.0	August	21	.8
February	15	6.0	August	27	1.2
March	8	.2	September	23	.5
March	10	5.0	October	1	1.0
March	13	2.8	October	19	2.0
March	14	.5	November	17	.8
March	15	.5	November	18	8.0
March	16	.5	November	19	1.8
April	2	2.3	December	6	1.2
April	3	.5	December	7	1.5
April	6	4.0	December	20	6.3

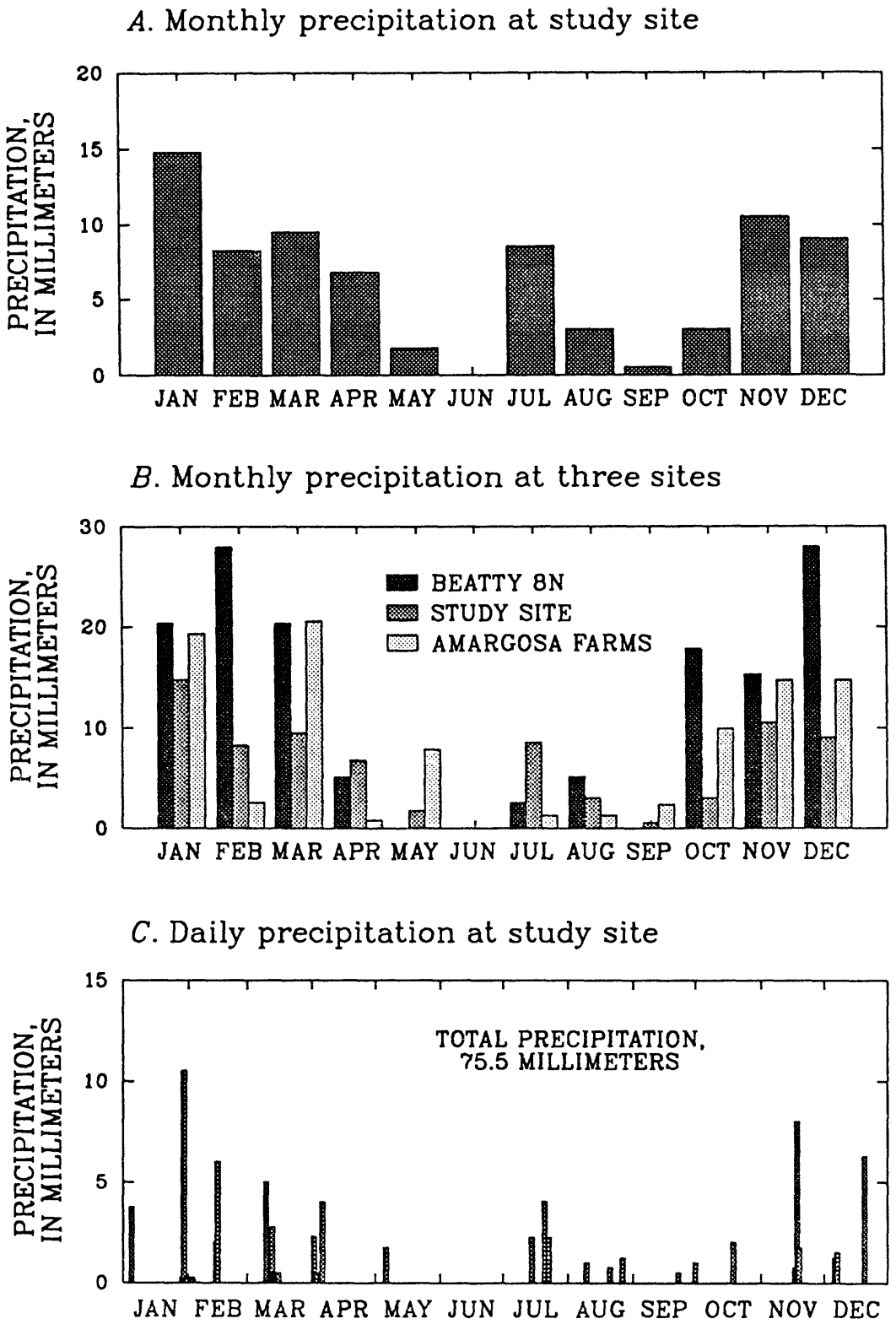

FIGURE 9.--Precipitation at or near study site for 1986. (A) Monthly precipitation at study site. (B) Comparison of monthly precipitation at study site with monthly precipitation at two National Oceanographic and Atmospheric Administration (NOAA) sites (Beatty 8N and Amargosa Farms) near study site. (C) Daily precipitation at study site.

SUMMARY

Meteorological data were collected adjacent to a low-level radioactive-waste facility near Beatty, Nev., in support of an ongoing study to estimate the potential for downward movement of radionuclides into the unsaturated sediments beneath waste-burial trenches at the facility, for calendar year 1986. This report provides daily averaged values of air temperature, relative humidity, vapor pressure, incident solar radiation, windspeed, wind direction, and daily totals of precipitation. A general description of instrumentation used and sensor installation is given.

The minimum hourly averaged air temperature for the year was -6.4 °C in February and the maximum was 42.6 °C in August. Hourly averaged values for relative humidity ranged from about 12 percent to nearly 90 percent. Daily maximum solar radiation values ranged from 180 W/m^2 in December to 1,054 W/m^2 in June. Mean daily windspeed ranged from 1.6 m/s to 10.5 m/s. Wind direction determined from hourly averaged data was predominantly from the northwest between January through March and October through December. The wind shifted during the summer months and was commonly from the southeast and southwest. Total measured precipitation for the year was 75.5 mm. Monthly precipitation ranged from 14.7 mm in January to zero in June. Daily precipitation totaled more than 5 mm only four times during 1986.

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BASIC DATA

This section contains table 3, which is a listing of daily averaged meteorological data collected at the study site for 1986.

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*

[Abbreviations: max, maximum; min, minimum; std. dev., standard deviation; °az, degrees Azimuth]

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
												Magnitude (meters per second)	Direction	
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min		°az	Std. dev.
86/01/01	24	8.1	17.4/ 2.1	118	519	66	87/40	0.69	0.82/0.60	1.8	2.5/ 1.0	1.1	309	42
86/01/02	24	7.6	15.2/ 1.0	92	459	66	89/43	.67	.77/ .59	1.8	3.2/ 1.0	.3	296	72
86/01/03	24	8.7	17.8/ 1.0	112	457	63	90/38	.68	.81/ .58	2.0	3.1/ 1.0	.9	302	58
86/01/04	23	10.9	16.2/ 6.0	91	531	61	89/40	.78	1.12/ .65	2.6	4.2/ 1.5	.8	130	65
86/01/05	24	10.8	13.6/ 8.0	40	185	86	90/78	1.12	1.24/ .95	1.8	2.8/ .7	.4	170	70
86/01/06	23	10.8	17.1/ 4.7	129	525	51	89/17	.60	.94/ .22	5.5	11.8/ 1.9	5.2	326	15
86/01/07	24	7.7	16.0/ .8	132	533	24	46/16	.25	.32/ .19	3.3	7.4/ 1.4	2.1	323	43
86/01/08	24	4.7	16.2/-3.4	120	488	38	60/16	.30	.36/ .26	1.6	2.5/ 1.0	1.1	316	37
86/01/09	24	7.0	19.8/-2.0	135	534	36	57/15	.32	.37/ .27	1.6	2.3/ .7	.7	321	57
86/01/10	24	9.6	23.5/- .3	134	537	33	52/14	.35	.41/ .31	1.7	2.6/ .6	1.0	312	46
86/01/11	24	10.3	22.9/ .8	133	525	34	56/14	.39	.46/ .34	1.7	3.0/ .8	1.0	310	46
86/01/12	24	10.6	22.8/ 1.9	132	545	35	58/15	.41	.49/ .34	1.9	3.1/ .9	1.1	314	48
86/01/13	24	9.7	21.3/ .6	121	555	33	55/15	.37	.45/ .31	2.0	2.8/ .8	1.3	302	40
86/01/14	24	9.9	15.1/ 4.5	53	245	31	45/19	.38	.60/ .32	2.3	3.9/ .7	.4	136	72
86/01/15	24	8.9	14.1/ 2.7	92	405	61	84/45	.69	.90/ .55	2.4	4.8/ 1.2	.9	119	62
86/01/16	24	8.2	15.5/ 3.2	103	494	69	87/45	.74	.87/ .65	2.1	3.7/ 1.1	.5	295	68
86/01/17	24	9.0	18.8/ 2.8	114	511	62	85/33	.68	.77/ .58	1.9	2.7/ 1.1	1.0	309	51
86/01/18	24	11.7	23.5/ 3.7	138	545	49	78/18	.59	.73/ .49	1.7	2.8/ 1.0	1.2	315	32
86/01/19	24	11.2	20.2/ 2.3	127	560	42	77/21	.52	.63/ .44	2.1	3.2/ 1.1	.6	292	66
86/01/20	24	11.0	19.0/ 3.4	141	568	35	70/16	.41	.62/ .24	3.7	6.5/ 1.7	3.3	317	19
86/01/21	24	8.4	15.5/ 2.0	82	301	25	38/17	.27	.32/ .23	2.2	5.5/ 1.2	1.5	314	37
86/01/22	24	8.1	16.4/ .7	101	477	29	43/17	.30	.35/ .27	1.8	2.4/ .9	.7	300	59
86/01/23	24	9.1	18.2/ .8	126	511	32	49/18	.35	.44/ .27	2.6	6.8/ 1.0	1.8	311	40
86/01/24	24	10.4	17.9/ 2.8	148	584	21	32/16	.27	.34/ .21	3.0	7.8/ 1.1	1.4	306	55
86/01/25	24	9.8	21.6/ .7	154	594	22	35/14	.26	.38/ .20	1.7	2.8/ 1.2	.6	329	61
86/01/26	24	10.0	22.5/ .3	149	586	20	27/14	.25	.39/ .17	1.8	2.7/ 1.1	1.2	308	37
86/01/27	24	10.5	22.9/ .2	155	598	20	30/14	.26	.40/ .18	2.1	3.0/ 1.1	.9	305	57
86/01/28	24	10.7	21.3/ 2.1	155	595	20	26/14	.26	.38/ .19	2.3	3.9/ 1.3	.3	289	75
86/01/29	24	11.2	18.9/ 1.6	103	591	20	36/15	.28	.56/ .19	2.7	4.6/ 1.2	.7	154	69
86/01/30	24	10.0	11.7/ 8.1	30	220	85	89/54	1.05	1.19/ .74	2.4	3.9/ .8	1.2	117	53
86/01/31	24	10.9	14.3/ 7.0	95	502	79	90/65	1.02	1.14/ .90	2.3	4.7/ 1.0	1.5	138	43

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*--Continued.

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min	Magnitude (meters per second)	Direction °az	Direction Std. dev.
86/02/01	*23*	10.3	16.6/ 3.8	165	609	73	90/46	0.90	1.05/0.72	1.7	2.5/ 0.8	0.4	282	68
86/02/02	24	9.1	17.3/ 2.9	160	603	69	90/38	.77	.97/ .67	2.2	4.2/ .9	.2	287	76
86/02/03	24	8.4	15.3/ .7	135	610	63	88/37	.66	.77/ .57	3.3	8.2/ 1.1	1.6	323	54
86/02/04	24	10.1	15.2/ 6.7	166	622	38	54/21	.46	.59/ .35	6.0	9.2/ 2.7	5.6	325	17
86/02/05	24	8.4	14.7/ 1.6	164	628	38	66/20	.40	.49/ .33	3.1	6.9/ 1.2	1.7	297	51
86/02/06	24	6.1	9.5/ 3.6	153	649	30	42/19	.28	.40/ .23	6.5	9.0/ 3.2	6.2	324	12
86/02/07	24	4.6	10.3/- .6	155	650	32	48/20	.27	.30/ .24	3.3	6.4/ 1.3	2.2	317	39
86/02/08	24	3.6	9.7/-4.6	146	668	39	72/20	.28	.36/ .22	2.9	5.1/ .9	2.3	334	26
86/02/09	24	3.7	9.5/- .7	178	657	24	29/19	.19	.23/ .16	5.2	8.6/ 2.2	4.9	332	12
86/02/10	24	2.9	11.0/-6.4	177	657	28	52/18	.21	.26/ .16	2.1	3.1/ .9	.4	316	72
86/02/11	24	2.0	7.1/-3.9	62	256	38	58/26	.27	.34/ .20	2.1	2.8/ .8	.9	292	61
86/02/12	24	4.9	10.4/-2.1	49	196	54	77/40	.47	.82/ .35	2.2	4.3/ .8	.4	117	72
86/02/13	24	11.8	17.3/ 7.6	111	740	64	81/44	.87	.95/ .79	3.1	4.8/ 1.5	2.8	120	15
86/02/14	24	13.2	16.7/ 9.1	76	414	69	86/56	1.04	1.20/ .88	4.7	7.6/ 1.8	4.3	130	16
86/02/15	24	11.1	15.8/ 7.8	90	507	74	90/47	.97	1.15/ .83	3.5	5.0/ 2.0	2.8	129	31
86/02/16	24	11.0	15.6/ 4.6	134	648	68	88/48	.88	1.03/ .72	3.6	4.6/ 2.3	2.7	115	37
86/02/17	24	12.9	19.9/ 5.6	150	576	65	89/31	.93	1.14/ .74	3.5	6.3/ 1.3	2.8	120	31
86/02/18	24	15.8	22.0/11.3	159	634	59	79/40	1.04	1.20/ .93	3.1	4.6/ 1.5	2.6	121	26
86/02/19	24	16.0	20.2/11.5	121	515	36	65/17	.66	1.06/ .30	5.8	10.5/ 1.8	4.2	214	39
86/02/20	24	10.8	18.2/ 2.2	186	712	38	69/18	.46	.61/ .32	2.2	3.1/ 1.5	.1	300	77
86/02/21	24	11.3	18.8/ 5.6	198	720	32	52/16	.40	.50/ .31	3.3	5.1/ 1.7	2.9	307	18
86/02/22	24	11.7	22.1/ 1.4	195	720	33	60/14	.40	.52/ .29	2.0	3.6/ 1.0	.7	280	61
86/02/23	24	15.9	25.3/ 6.5	197	714	32	54/15	.53	.61/ .47	3.9	7.0/ 1.8	3.6	318	16
86/02/24	24	17.6	27.7/ 7.7	207	732	33	63/14	.60	.75/ .48	2.1	2.9/ 1.1	.4	305	71
86/02/25	24	18.0	30.1/ 7.3	212	746	34	68/12	.60	.75/ .46	2.0	3.1/ 1.3	.9	309	53
86/02/26	24	19.2	30.5/ 9.0	214	756	25	46/12	.51	.62/ .37	2.2	3.3/ 1.1	1.2	316	48
86/02/27	24	19.2	29.5/ 8.8	211	746	23	43/13	.48	.60/ .36	2.1	3.1/ 1.1	.1	344	77
86/02/28	24	17.7	28.6/ 6.0	215	753	22	45/12	.42	.51/ .34	2.1	3.1/ 1.0	.4	293	72

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*--Continued.

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
												Magnitude (meters per second)	Direction	
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min		°az	Std. dev.
86/03/01	24	18.1	27.8/ 9.1	186	743	22	34/13	0.43	0.51/0.36	2.2	3.3/ 1.0	0.8	287	63
86/03/02	24	16.7	23.7/11.1	202	738	31	42/19	.58	.69/ .48	4.2	7.4/ 1.8	3.1	333	36
86/03/03	24	16.8	26.1/ 8.0	186	695	41	75/17	.73	.92/ .57	2.4	5.1/ 1.1	1.5	311	38
86/03/04	24	17.9	28.2/ 8.0	222	768	30	56/13	.54	.67/ .40	2.0	3.5/ .8	1.2	305	43
86/03/05	24	18.2	28.3/ 9.1	226	780	22	40/13	.43	.51/ .36	2.3	4.2/ 1.3	.7	289	63
86/03/06	24	17.4	27.4/ 7.8	214	783	24	41/13	.44	.51/ .37	2.3	4.1/ 1.3	1.1	273	55
86/03/07	24	16.0	23.8/ 8.0	156	615	28	42/17	.49	.67/ .40	2.3	4.6/ 1.2	.6	119	66
86/03/08	24	15.2	19.8/10.3	77	286	43	66/30	.76	1.05/ .58	4.2	6.1/ 2.1	2.1	157	54
86/03/09	24	11.1	16.5/ 2.6	178	707	41	85/20	.49	.69/ .32	3.3	5.9/ 1.3	1.8	141	50
86/03/10	24	8.1	10.8/ 5.6	48	212	82	90/27	.89	1.09/ .36	4.3	6.0/ 2.3	4.1	127	9
86/03/11	24	11.1	17.8/ 3.9	229	811	57	90/20	.68	.96/ .39	2.3	4.7/ 1.0	1.5	281	41
86/03/12	24	10.9	17.0/ 6.4	197	732	38	63/16	.48	.64/ .23	4.7	8.2/ 2.0	1.7	9	63
86/03/13	24	7.9	13.6/ 1.4	118	487	41	88/19	.40	.77/ .23	3.7	5.7/ 1.0	1.3	120	63
86/03/14	24	9.7	16.2/ 3.8	244	809	48	88/18	.53	.77/ .31	3.3	6.0/ .5	1.7	312	53
86/03/15	24	8.8	16.5/ 3.0	189	931	51	80/17	.55	.78/ .33	3.8	7.1/ 1.6	2.4	151	46
86/03/16	24	7.2	10.4/ 4.9	96	631	75	88/53	.76	.86/ .67	3.3	4.8/ 1.3	2.6	126	33
86/03/17	24	9.8	15.9/ 4.2	237	799	43	82/18	.48	.74/ .28	4.9	9.0/ 1.8	4.4	323	21
86/03/18	24	11.8	18.1/ 6.1	255	841	22	29/16	.30	.34/ .27	6.4	8.8/ 3.8	6.0	329	11
86/03/19	24	14.2	22.2/ 7.6	255	845	21	36/15	.34	.42/ .27	3.6	5.4/ .9	2.7	310	32
86/03/20	24	14.4	23.9/ 3.8	258	854	32	63/15	.47	.57/ .39	1.9	3.0/ .9	.6	286	62
86/03/21	24	15.5	25.4/ 5.9	263	867	29	52/14	.45	.60/ .35	2.1	3.2/ 1.0	.7	274	63
86/03/22	24	16.2	26.8/ 6.0	265	870	23	39/13	.40	.48/ .33	2.2	2.9/ .9	.8	273	60
86/03/23	24	16.9	25.9/ 7.6	190	778	21	32/13	.39	.47/ .34	2.4	3.8/ 1.0	.8	264	64
86/03/24	24	17.4	26.1/10.0	210	712	20	30/13	.39	.46/ .27	2.2	3.3/ .9	.6	320	66
86/03/25	24	19.0	27.2/11.0	263	865	17	23/13	.39	.50/ .27	3.8	6.1/ 1.5	3.2	306	17
86/03/26	24	18.4	28.9/ 7.9	265	872	20	35/13	.41	.52/ .31	2.1	3.3/ 1.0	.2	299	77
86/03/27	24	19.8	30.4/10.2	267	876	19	30/12	.43	.54/ .32	2.4	4.2/ 1.0	.7	273	64
86/03/28	24	21.1	31.3/ 9.8	242	856	17	26/12	.44	.56/ .30	2.7	8.4/ 1.0	.6	110	69
86/03/29	24	22.1	29.1/14.7	190	755	20	31/14	.54	.58/ .48	2.1	3.5/ 1.2	.4	282	70
86/03/30	24	20.2	29.4/11.2	250	851	25	50/13	.54	.79/ .33	2.2	4.5/ 1.1	.7	260	63
86/03/31	24	20.0	27.1/10.6	166	610	19	32/14	.44	.51/ .32	2.0	4.5/ 1.0	.4	355	70

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*--Continued.

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
												Magnitude (meters per second)	Direction	
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min		°az	Std. dev.
86/04/01	24	20.7	26.4/14.5	262	883	20	32/15	0.48	0.55/0.33	3.6	7.3/ 1.0	1.7	227	54
86/04/02	24	10.9	15.5/ 6.0	274	891	20	23/17	.26	.31/ .21	10.5	13.1/ 6.1	10.3	328	5
86/04/03	24	14.0	22.4/ 7.5	283	902	18	21/15	.30	.42/ .22	4.6	8.4/ 1.0	3.5	310	34
86/04/04	24	14.5	23.3/ 4.3	262	804	20	30/14	.33	.43/ .22	3.1	4.7/ 1.2	1.1	157	63
86/04/05	24	16.9	23.9/ 7.4	229	748	18	24/14	.35	.44/ .24	3.8	6.1/ 1.8	2.5	131	42
86/04/06	24	11.8	14.2/ 8.3	109	612	52	82/19	.72	1.10/ .32	3.2	4.8/ 1.4	2.1	134	40
86/04/07	24	12.3	19.0/ 6.3	246	737	56	86/24	.75	.93/ .51	2.4	3.5/ 1.1	.7	135	64
86/04/08	24	14.4	21.9/ 6.1	291	980	42	82/16	.61	.85/ .40	2.0	2.7/ 1.0	.6	261	59
86/04/09	24	16.6	25.5/ 6.2	294	933	33	64/15	.55	.68/ .42	2.4	4.5/ 1.1	1.1	288	54
86/04/10	24	17.6	26.1/ 8.3	232	847	28	55/14	.51	.69/ .37	2.3	5.2/ 1.1	1.0	257	57
86/04/11	24	18.7	27.3/ 7.7	298	934	22	43/13	.44	.51/ .34	2.4	4.3/ 1.0	.7	209	66
86/04/12	24	17.8	26.3/ 8.8	292	923	24	41/14	.49	.73/ .22	5.0	10.0/ 2.6	2.3	179	57
86/04/13	24	12.7	19.0/ 7.1	308	952	18	23/16	.28	.36/ .21	5.2	7.6/ 1.6	4.9	333	11
86/04/14	24	13.3	20.9/ 5.2	176	783	18	22/15	.29	.38/ .19	2.5	4.0/ 1.3	.6	89	70
86/04/15	24	16.3	25.5/ 5.9	269	931	17	22/13	.33	.46/ .21	4.1	7.0/ 1.6	2.6	191	46
86/04/16	24	12.0	18.8/ 6.6	192	758	29	41/18	.41	.50/ .32	3.4	6.9/ 1.2	.9	359	67
86/04/17	24	13.2	19.8/ 6.1	280	950	21	31/15	.32	.37/ .26	4.2	5.9/ 2.1	3.6	308	22
86/04/18	24	14.2	21.8/ 7.4	304	937	19	31/15	.32	.40/ .22	4.2	6.6/ 1.4	3.8	329	13
86/04/19	24	16.2	26.8/ 4.8	316	969	17	21/13	.33	.48/ .18	2.8	6.4/ 1.2	.9	271	64
86/04/20	24	21.6	31.9/10.6	312	974	15	19/12	.41	.58/ .25	3.1	6.0/ 1.9	1.9	312	44
86/04/21	24	23.8	34.3/11.5	316	967	16	27/11	.47	.62/ .34	2.5	3.9/ 1.2	.7	239	64
86/04/22	24	22.4	31.7/12.6	295	869	16	22/12	.44	.57/ .32	3.6	7.6/ 1.5	1.6	183	59
86/04/23	24	21.5	27.8/15.6	283	944	16	18/13	.41	.53/ .33	4.4	7.0/ 2.4	3.2	144	38
86/04/24	24	19.6	25.5/13.7	290	922	18	28/14	.42	.48/ .33	2.9	4.1/ 1.8	1.5	129	48
86/04/25	24	18.8	25.4/11.2	304	922	17	22/14	.38	.48/ .30	4.8	9.6/ 2.2	.3	48	78
86/04/26	24	15.5	20.5/10.3	319	976	17	19/15	.31	.38/ .24	5.9	8.7/ 1.7	5.3	343	14
86/04/27	24	17.3	27.0/ 6.4	323	968	16	20/13	.34	.49/ .20	2.1	3.3/ 1.3	.5	217	66
86/04/28	24	21.4	31.2/ 9.3	328	984	15	19/12	.41	.57/ .23	3.0	4.8/ 1.4	1.0	152	65
86/04/29	23	22.7	29.8/12.0	330	974	15	21/13	.44	.55/ .30	2.3	4.1/ 1.2	.6	184	64
86/04/30	24	21.6	29.4/10.2	302	891	15	21/12	.41	.53/ .27	2.9	4.8/ 1.5	1.3	148	56

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*--Continued.

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
												Magnitude (meters per second)	Direction	
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min		°az	Std. dev.
86/05/01	24	23.4	30.2/16.2	258	963	14	17/12	0.43	0.55/0.32	4.0	5.6/ 1.4	3.1	136	32
86/05/02	24	24.8	31.9/14.9	328	973	14	18/12	.46	.58/ .32	4.3	6.1/ 1.9	3.2	156	35
86/05/03	24	22.2	29.2/15.5	319	986	17	24/13	.45	.54/ .38	5.4	8.9/ 1.9	4.5	171	26
86/05/04	24	16.9	22.8/10.7	332	985	18	28/15	.36	.43/ .25	2.9	5.6/ 1.3	.8	250	64
86/05/05	24	16.5	24.9/ 4.5	299	969	17	21/14	.34	.46/ .18	3.1	4.8/ 1.1	1.7	163	50
86/05/06	24	11.0	15.7/ 7.8	134	961	46	68/21	.59	.79/ .32	3.3	5.2/ 1.6	1.4	80	57
86/05/07	24	14.5	21.0/ 8.0	303	911	24	42/15	.37	.51/ .30	5.8	8.0/ 3.4	5.5	323	5
86/05/08	24	17.3	23.5/10.7	293	992	18	24/14	.36	.43/ .28	4.8	7.2/ 2.4	4.3	322	16
86/05/09	24	18.6	26.6/ 9.4	341	1,003	17	22/13	.37	.48/ .27	3.5	5.0/ 1.8	1.2	302	62
86/05/10	24	20.8	29.1/10.4	331	995	16	20/13	.40	.53/ .26	3.4	5.9/ 1.7	2.0	172	45
86/05/11	24	20.2	27.7/12.7	335	985	17	25/13	.42	.51/ .27	2.6	4.5/ 1.3	.6	132	69
86/05/12	24	21.5	30.4/10.6	340	991	15	20/12	.41	.55/ .26	2.5	5.2/ 1.2	1.1	297	52
86/05/13	24	23.4	32.1/11.3	326	1,007	14	19/12	.43	.58/ .26	2.2	3.8/ 1.3	.5	241	65
86/05/14	24	25.7	32.0/19.1	312	976	14	16/12	.47	.58/ .36	3.9	6.1/ 1.5	2.4	287	47
86/05/15	24	25.2	31.4/17.2	325	999	14	17/12	.47	.58/ .34	3.7	5.8/ 1.6	3.0	326	24
86/05/16	24	24.1	30.1/17.3	347	1,010	14	16/12	.44	.55/ .33	5.4	7.4/ 2.6	4.7	325	24
86/05/17	24	21.7	30.4/12.3	338	941	15	18/12	.41	.56/ .26	2.4	4.3/ 1.0	.5	301	68
86/05/18	24	24.1	34.7/11.5	353	1,020	14	18/11	.45	.63/ .26	2.3	3.5/ 1.0	.7	252	63
86/05/19	24	26.6	36.4/13.7	345	1,014	13	18/10	.49	.66/ .28	3.4	5.9/ 1.2	1.5	211	58
86/05/20	24	27.8	34.5/21.5	322	1,001	13	16/11	.52	.63/ .42	3.9	7.7/ 1.2	2.5	163	44
86/05/21	24	24.2	30.1/18.6	334	1,023	15	17/13	.46	.56/ .36	4.2	5.6/ 2.2	1.7	141	59
86/05/22	24	20.7	27.6/13.5	319	983	15	18/13	.39	.51/ .28	4.9	8.5/ 1.6	3.7	308	33
86/05/23	22	22.5	32.0/10.7	306	986	15	19/12	.42	.58/ .25	2.2	4.0/ 1.0	.9	261	58
86/05/24	24	25.6	35.8/13.9	342	992	14	18/10	.47	.64/ .29	2.3	3.9/ 1.3	.9	266	58
86/05/25	24	27.8	38.4/13.7	348	1,011	13	18/10	.51	.69/ .29	2.4	4.1/ 1.1	1.1	265	55
86/05/26	24	29.0	38.7/17.1	345	1,002	13	17/10	.53	.70/ .33	2.9	4.3/ 1.4	.8	204	67
86/05/27	24	29.3	38.8/18.0	342	1,005	13	16/10	.54	.70/ .35	2.6	4.0/ 1.3	.5	248	72
86/05/28	24	30.3	38.4/18.3	339	993	12	17/10	.56	.70/ .36	3.0	5.3/ 1.3	.8	213	66
86/05/29	24	31.3	39.2/20.8	339	996	12	16/10	.58	.71/ .41	2.7	5.4/ 1.1	.9	213	64
86/05/30	24	31.9	39.3/22.8	296	1,029	12	17/ 9	.60	.72/ .47	2.5	5.0/ 1.1	.2	155	77
86/05/31	24	30.3	38.8/19.6	289	992	13	16/10	.57	.72/ .39	3.1	6.5/ 1.5	.2	229	78

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*--Continued.

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
												Magnitude (meters per second)	Direction	
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min		°az	Std. dev.
86/06/01	24	32.1	38.6/24.2	296	997	12	16/10	0.61	0.71/0.49	3.7	8.6/ 1.6	1.8	319	50
86/06/02	24	31.7	38.8/21.0	318	912	13	22/10	.63	.72/ .52	3.3	6.6/ .9	.7	131	69
86/06/03	24	32.2	38.9/25.6	345	983	13	18/10	.63	.72/ .49	3.1	4.9/ 1.2	1.7	141	50
86/06/04	24	30.3	38.0/21.9	329	1,054	13	16/10	.57	.69/ .44	3.8	6.6/ 1.8	2.2	161	48
86/06/05	24	27.8	34.4/20.4	359	1,012	14	17/11	.53	.64/ .42	3.5	5.0/ 1.9	1.8	132	52
86/06/06	24	26.9	33.9/20.3	355	1,012	14	17/12	.52	.64/ .41	3.4	4.5/ 1.5	2.4	127	37
86/06/07	24	27.0	32.7/20.2	353	1,003	14	16/12	.51	.62/ .40	4.2	9.6/ 1.8	.9	105	70
86/06/08	24	26.7	32.8/20.3	354	1,003	14	17/12	.50	.61/ .41	7.0	9.0/ 4.6	6.6	329	9
86/06/09	24	27.0	34.9/17.3	365	1,028	13	17/11	.50	.64/ .34	4.6	6.4/ 2.8	4.1	317	20
86/06/10	24	27.4	35.6/14.7	363	1,019	13	18/11	.51	.66/ .30	2.2	3.2/ 1.3	.1	133	78
86/06/11	24	28.5	37.9/16.7	362	1,018	13	17/10	.53	.70/ .33	2.7	4.6/ 1.6	.6	200	69
86/06/12	24	28.6	36.9/18.2	357	1,016	13	16/10	.53	.68/ .35	2.9	5.1/ 1.2	.9	206	64
86/06/13	24	28.7	37.9/16.7	360	1,020	13	17/10	.53	.69/ .33	2.6	4.0/ 1.3	.9	150	62
86/06/14	24	29.3	38.2/17.9	330	964	13	17/10	.54	.70/ .35	3.4	5.3/ 1.6	1.5	152	57
86/06/15	24	29.8	37.2/21.6	355	1,009	13	15/10	.55	.69/ .41	3.5	4.8/ 1.4	2.2	122	45
86/06/16	24	30.1	38.0/22.2	360	1,005	13	16/10	.56	.71/ .43	3.8	5.9/ 2.0	2.6	154	41
86/06/17	24	29.3	38.0/17.8	367	1,023	13	17/10	.54	.70/ .35	3.5	6.2/ 1.4	2.0	174	47
86/06/18	24	29.5	36.7/21.0	360	1,009	13	16/10	.55	.68/ .40	3.3	4.9/ 1.4	1.9	141	45
86/06/19	24	29.2	36.3/22.3	365	1,025	13	15/10	.54	.67/ .42	4.4	7.6/ 1.8	2.5	293	50
86/06/20	24	27.6	36.5/17.6	364	1,028	13	17/10	.51	.67/ .34	2.6	3.7/ 1.4	.7	196	67
86/06/21	24	28.1	37.8/15.3	365	1,022	13	17/10	.52	.70/ .31	2.3	3.8/ 1.1	.8	253	60
86/06/22	24	29.6	39.9/15.9	366	1,026	13	17/ 9	.54	.72/ .32	2.4	3.6/ 1.5	.6	252	68
86/06/23	24	29.5	38.8/18.5	279	1,047	13	16/ 9	.54	.69/ .36	3.1	6.9/ 1.3	1.4	226	57
86/06/24	24	32.0	41.0/19.7	351	996	12	16/ 9	.59	.74/ .38	3.1	7.1/ .8	.7	265	69
86/06/25	24	33.4	41.3/22.0	361	1,015	12	15/ 9	.61	.76/ .42	2.6	4.9/ 1.1	1.0	246	57
86/06/26	24	32.7	41.9/21.0	346	989	12	16/ 9	.60	.75/ .40	3.4	5.8/ 1.6	1.5	154	56
86/06/27	24	32.4	39.2/20.4	271	794	12	16/10	.59	.72/ .39	3.2	5.3/ 1.5	1.9	171	48
86/06/28	24	31.7	39.7/18.0	322	1,001	12	17/ 9	.58	.73/ .35	4.2	8.0/ 1.5	2.7	201	45
86/06/29	24	31.2	38.5/21.1	363	1,015	12	16/10	.58	.71/ .40	3.0	5.2/ 1.4	1.0	218	61
86/06/30	24	29.2	37.3/17.9	362	1,013	13	17/10	.54	.70/ .36	2.9	4.5/ 1.3	1.0	171	62

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*--Continued.

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
												Magnitude (meters per second)	Direction	
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min		°az	Std. dev.
86/07/01	24	30.8	39.9/18.4	348	985	12	16/ 9	0.57	0.74/0.36	2.4	4.2/ 1.0	0.8	248	61
86/07/02	24	33.0	41.8/21.6	351	991	12	16/ 9	.61	.77/ .42	2.5	4.6/ 1.2	.9	223	60
86/07/03	24	34.6	41.2/27.8	337	967	12	14/ 9	.66	.78/ .53	3.8	6.0/ 1.8	2.2	148	47
86/07/04	24	33.0	40.4/26.8	345	995	12	14/ 9	.63	.76/ .52	4.1	7.5/ 2.2	3.0	136	37
86/07/05	24	28.8	35.3/20.6	326	995	13	16/11	.54	.66/ .40	3.1	4.6/ 1.6	1.6	169	50
86/07/06	24	28.8	34.9/22.1	359	989	13	16/11	.54	.65/ .43	4.1	5.6/ 1.6	2.8	153	40
86/07/07	24	28.3	35.2/21.0	346	999	13	16/11	.53	.65/ .40	3.5	5.6/ 1.3	1.7	165	55
86/07/08	24	28.7	36.6/19.7	360	1,014	13	16/11	.53	.68/ .30	3.1	5.1/ 1.4	1.9	178	46
86/07/09	24	29.2	37.1/17.7	352	1,008	13	17/10	.54	.69/ .35	2.9	4.8/ 1.2	.6	186	69
86/07/10	24	29.9	38.3/18.1	320	1,017	13	17/10	.55	.70/ .35	2.6	4.6/ 1.1	1.3	220	53
86/07/11	24	33.5	40.4/24.6	346	981	12	14/ 9	.62	.75/ .46	3.4	4.8/ 1.9	1.2	219	62
86/07/12	24	33.9	40.8/25.3	335	969	12	15/ 9	.63	.75/ .48	3.8	5.0/ 1.6	2.8	142	38
86/07/13	24	32.7	39.8/26.4	346	985	12	14/10	.61	.73/ .50	3.7	4.9/ 1.2	2.2	149	47
86/07/14	*23*	31.6	39.6/22.1	329	975	12	15/10	.60	.74/ .43	4.2	8.9/ 1.9	2.3	157	52
86/07/15	24	25.8	30.4/21.2	211	910	49	81/15	1.58	2.05/ .60	3.0	4.7/ 1.2	1.3	119	56
86/07/16	24	29.2	37.0/22.4	350	991	19	36/10	.74	1.20/ .47	4.0	5.7/ 2.8	3.1	130	33
86/07/17	24	27.0	34.5/15.5	349	993	14	18/11	.51	.64/ .32	3.5	4.6/ 1.3	2.1	148	45
86/07/18	24	28.0	35.5/20.2	348	993	14	18/11	.54	.67/ .42	3.3	4.5/ 1.5	2.3	136	38
86/07/19	24	28.2	38.0/16.6	355	1,011	13	17/10	.53	.70/ .33	2.5	3.6/ .9	.8	256	63
86/07/20	24	30.0	40.3/18.4	316	1,023	13	16/ 9	.56	.72/ .36	3.1	8.2/ .9	1.5	113	56
86/07/21	*23*	27.1	36.2/21.3	202	876	27	62/11	.88	1.69/ .46	2.9	5.7/ 1.3	.4	109	72
86/07/22	24	24.5	30.5/19.7	216	835	50	80/24	1.46	1.85/1.01	2.4	4.8/ .9	1.1	173	54
86/07/23	24	26.7	33.2/21.1	305	981	36	62/14	1.15	1.61/ .68	3.3	6.8/ 1.3	1.0	244	64
86/07/24	24	26.3	34.1/15.9	285	854	37	84/13	1.06	1.61/ .59	2.5	4.9/ 1.0	1.0	227	58
86/07/25	24	27.7	35.3/17.5	342	984	18	43/11	.64	.95/ .45	2.6	5.9/ 1.1	1.2	207	53
86/07/26	24	27.7	34.4/18.7	338	974	14	20/11	.55	.65/ .40	2.9	4.6/ 1.2	1.3	265	53
86/07/27	24	27.6	35.8/17.7	342	991	14	20/11	.54	.66/ .40	3.0	4.5/ 1.6	1.3	166	56
86/07/28	24	27.8	37.0/16.4	349	1,001	13	17/10	.52	.67/ .33	3.4	6.6/ 1.6	1.8	185	53
86/07/29	24	27.5	37.3/15.1	346	1,003	13	17/10	.51	.68/ .31	2.2	3.8/ 1.0	.8	253	59
86/07/30	24	28.8	39.8/15.5	347	1,007	13	17/ 9	.53	.72/ .31	2.2	3.8/ .8	.6	253	65
86/07/31	24	30.2	40.8/17.5	345	1,003	12	17/ 9	.55	.74/ .34	2.4	4.2/ 1.3	.9	253	61

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*--Continued.

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
												Magnitude (meters per second)	Direction	
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min		°az	Std. dev.
86/08/01	24	31.0	41.7/18.6	340	992	12	16/ 9	0.57	0.75/0.36	2.7	4.4/ 1.0	0.9	227	64
86/08/02	24	30.8	41.0/19.0	336	980	12	16/ 9	.57	.74/ .36	2.9	4.6/ 1.5	.6	225	71
86/08/03	24	32.1	41.9/20.6	338	986	12	16/ 9	.59	.76/ .39	2.7	4.2/ 1.4	1.0	245	62
86/08/04	24	33.3	42.6/22.7	334	978	12	15/ 8	.61	.78/ .43	2.5	4.2/ 1.2	.9	226	61
86/08/05	24	33.3	41.7/22.4	298	969	12	17/ 9	.62	.76/ .45	3.0	5.2/ 1.4	1.2	175	59
86/08/06	24	34.4	41.2/28.1	327	956	11	14/ 9	.64	.76/ .55	3.8	5.6/ 1.0	2.4	138	45
86/08/07	24	33.2	41.2/21.5	330	977	12	16/ 9	.62	.76/ .42	3.0	4.6/ 1.5	1.4	161	55
86/08/08	24	31.8	40.9/21.2	327	968	12	16/ 9	.59	.75/ .41	2.6	4.9/ .9	.9	255	61
86/08/09	24	32.5	41.3/21.8	317	940	12	16/ 9	.61	.77/ .42	3.4	5.5/ 1.6	1.1	157	65
86/08/10	24	32.2	39.4/25.6	282	934	19	58/10	.87	1.91/ .60	3.8	6.4/ 1.6	1.5	110	58
86/08/11	24	30.8	39.6/19.3	304	905	33	83/10	1.20	1.89/ .70	2.4	4.5/ 1.1	.5	184	69
86/08/12	24	32.6	39.9/26.4	300	926	21	38/10	.94	1.32/ .64	2.9	4.3/ 1.4	1.2	143	59
86/08/13	24	32.2	40.4/22.6	307	927	16	29/10	.72	.83/ .57	2.8	4.8/ 1.2	1.0	247	63
86/08/14	24	32.8	40.1/24.1	305	923	13	17/10	.64	.76/ .51	2.8	4.7/ 1.4	1.0	153	62
86/08/15	24	30.7	39.9/21.2	315	950	13	17/10	.59	.74/ .44	2.9	4.9/ 1.1	.9	177	64
86/08/16	24	29.3	38.6/18.3	317	952	13	17/10	.55	.72/ .36	3.1	5.2/ 1.4	.8	185	67
86/08/17	24	29.0	39.3/18.1	321	963	13	17/10	.54	.72/ .35	3.0	5.2/ 1.7	.6	209	71
86/08/18	24	26.3	29.9/21.9	114	404	29	57/15	1.02	1.62/ .41	2.8	6.0/ 1.0	1.4	239	52
86/08/19	24	28.8	36.7/18.8	296	902	37	74/14	1.24	1.74/ .86	2.1	3.8/ .9	.9	231	56
86/08/20	24	32.1	39.6/25.1	267	875	19	31/10	.88	1.06/ .72	2.9	5.1/ 1.2	1.3	254	55
86/08/21	24	31.1	39.6/23.3	282	912	25	59/10	1.03	1.77/ .54	2.1	4.5/ 1.0	.8	188	55
86/08/22	24	32.4	40.2/22.6	296	923	14	26/10	.69	.80/ .54	3.1	4.9/ 1.3	1.1	151	62
86/08/23	24	30.8	39.8/20.9	302	926	13	17/ 9	.58	.73/ .44	3.2	6.5/ 1.3	1.2	217	62
86/08/24	24	29.0	36.5/19.4	282	889	18	33/13	.76	1.29/ .37	4.0	6.3/ 1.6	2.9	128	38
86/08/25	24	31.3	38.6/22.0	291	896	18	33/11	.80	.95/ .63	2.8	7.4/ 1.4	.9	136	63
86/08/26	24	29.9	36.0/22.0	252	1,032	24	48/13	.96	1.34/ .71	3.7	5.5/ 2.0	1.9	110	52
86/08/27	24	25.3	31.9/20.9	140	695	52	83/27	1.59	2.11/1.16	2.6	4.6/ 1.7	.9	288	61
86/08/28	24	28.1	36.9/17.3	284	898	34	76/11	1.09	1.57/ .68	2.1	3.6/ 1.0	.6	198	63
86/08/29	24	31.0	38.3/20.6	294	899	19	42/10	.78	1.14/ .53	3.6	4.8/ 1.7	2.1	149	48
86/08/30	24	28.7	36.1/18.2	295	917	14	19/11	.56	.67/ .41	2.9	4.7/ 1.4	.8	131	66
86/08/31	24	26.8	36.3/17.4	289	902	14	17/11	.51	.67/ .35	2.6	4.0/ 1.5	.6	218	70

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*--Continued.

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
												Magnitude (meters per second)	Direction	
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min		°az	Std. dev.
86/09/01	24	28.5	37.4/19.3	289	907	13	16/10	0.53	0.69/0.38	2.6	5.1/ 1.4	1.0	258	58
86/09/02	24	29.8	38.4/20.5	287	903	13	16/10	.55	.70/ .39	3.1	6.2/ 1.3	2.3	304	23
86/09/03	24	29.9	39.2/18.4	290	910	13	17/10	.56	.72/ .36	2.2	3.8/ 1.0	.8	276	56
86/09/04	24	29.6	40.4/17.7	289	909	13	17/ 9	.55	.72/ .35	2.1	4.3/ .8	.8	250	60
86/09/05	23	30.2	40.6/18.2	289	902	13	17/ 9	.56	.73/ .36	2.3	4.0/ .6	1.0	257	56
86/09/06	24	30.1	39.5/20.2	277	886	13	16/10	.56	.72/ .39	2.9	4.2/ 1.5	1.0	224	62
86/09/07	24	29.8	37.1/18.6	277	883	13	17/10	.56	.69/ .37	3.2	4.9/ 1.3	1.5	161	56
86/09/08	24	28.5	35.3/21.6	280	897	13	16/11	.54	.65/ .44	3.7	4.9/ 1.3	2.4	156	42
86/09/09	24	25.6	32.0/19.9	278	883	15	20/12	.51	.60/ .42	4.2	8.7/ 1.3	1.3	93	66
86/09/10	24	22.1	29.1/15.3	275	881	15	18/13	.42	.54/ .31	5.1	9.3/ 2.0	4.7	324	12
86/09/11	24	21.7	31.4/10.5	245	787	15	19/12	.41	.58/ .25	2.0	3.0/ 1.0	.4	250	70
86/09/12	24	23.0	32.0/13.9	270	864	15	18/12	.43	.58/ .29	3.2	5.6/ 1.0	1.3	180	60
86/09/13	24	21.3	29.8/10.1	243	852	15	19/13	.41	.55/ .24	3.4	6.5/ 1.5	1.7	134	53
86/09/14	24	23.0	30.3/17.6	268	860	16	23/12	.47	.56/ .36	4.0	5.7/ 2.5	2.9	140	38
86/09/15	24	19.2	25.8/ 9.0	251	865	16	22/14	.38	.48/ .26	2.3	3.9/ 1.2	.6	184	67
86/09/16	24	19.7	28.0/ 8.6	261	869	16	20/13	.39	.52/ .23	2.9	4.0/ 1.8	1.3	121	54
86/09/17	24	21.6	29.1/11.7	250	839	18	30/13	.47	.54/ .37	3.2	4.7/ 2.0	1.6	132	54
86/09/18	24	21.6	27.5/16.0	259	851	16	20/14	.43	.52/ .37	4.2	7.3/ 2.3	1.2	277	66
86/09/19	24	19.9	26.0/15.0	252	836	16	18/14	.39	.49/ .32	3.5	4.8/ 2.3	1.8	112	52
86/09/20	24	16.9	24.8/ 7.8	260	847	17	21/14	.34	.46/ .22	2.3	4.2/ 1.4	.4	266	71
86/09/21	24	16.6	26.2/ 7.2	258	852	17	20/14	.33	.48/ .21	2.2	3.8/ 1.0	.2	235	76
86/09/22	24	17.7	26.3/ 7.4	250	831	16	20/14	.35	.48/ .21	3.1	4.9/ 1.1	.8	156	67
86/09/23	24	17.3	22.1/11.8	191	751	25	40/16	.50	.81/ .33	2.8	5.3/ 1.2	.8	126	64
86/09/24	24	15.9	22.2/10.5	203	780	33	47/22	.59	.69/ .45	5.1	7.1/ 2.3	4.0	135	33
86/09/25	24	15.5	22.3/ 7.0	233	839	29	48/16	.48	.68/ .36	3.1	5.0/ 1.2	1.9	128	41
86/09/26	24	15.1	22.2/ 5.3	244	806	27	46/16	.44	.61/ .33	3.5	5.0/ 1.7	2.4	122	40
86/09/27	24	14.9	20.3/ 9.5	156	764	26	36/18	.44	.56/ .34	3.3	4.7/ 1.6	2.6	95	31
86/09/28	24	16.6	22.3/ 8.8	161	732	19	30/15	.37	.43/ .31	4.0	6.8/ 1.4	2.2	324	50
86/09/29	24	17.5	25.3/10.4	238	806	16	19/14	.34	.46/ .24	4.7	7.0/ 1.4	4.2	309	20
86/09/30	24	17.3	27.4/ 7.7	233	795	17	20/13	.35	.50/ .21	2.6	5.7/ 1.3	1.3	285	55

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*--Continued.

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
												Magnitude (meters per second)	Direction	
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min		°az	Std. dev.
86/10/01	24	15.9	25.0/ 7.9	201	775	25	55/15	0.45	0.86/0.23	4.2	9.7/ 2.0	2.6	323	43
86/10/02	24	13.1	15.8/10.6	63	318	51	78/35	.77	1.12/ .58	3.9	7.2/ 1.0	2.3	322	49
86/10/03	24	16.7	22.8/11.3	187	774	23	35/15	.43	.55/ .32	4.0	7.2/ 1.4	2.6	329	43
86/10/04	24	17.6	26.0/ 9.4	227	777	20	32/14	.40	.48/ .29	3.5	7.6/ 1.3	2.2	330	41
86/10/05	24	20.2	28.2/12.5	224	776	16	21/13	.40	.51/ .31	2.7	4.0/ 1.6	1.3	309	48
86/10/06	24	20.4	29.4/10.2	223	760	17	24/13	.41	.54/ .31	2.0	2.9/ 1.2	.5	275	63
86/10/07	24	20.2	29.9/ 9.8	218	758	19	32/13	.44	.55/ .34	2.3	3.7/ 1.1	1.0	277	57
86/10/08	24	20.6	31.0/ 9.7	220	767	18	29/12	.43	.56/ .33	2.3	4.4/ .9	1.3	271	48
86/10/09	*23*	18.1	27.6/11.1	161	596	20	30/13	.43	.55/ .29	2.9	8.3/ .7	1.7	240	47
86/10/10	24	18.0	24.6/ 9.5	206	723	46	77/26	.91	1.08/ .54	3.1	5.0/ 1.7	1.3	164	60
86/10/11	24	17.1	22.8/10.5	215	749	24	58/15	.45	.89/ .24	4.8	8.0/ 1.5	4.2	338	17
86/10/12	24	13.2	23.2/ 5.9	216	757	18	20/14	.28	.42/ .19	3.5	5.2/ 1.5	2.2	310	44
86/10/13	24	13.2	25.5/ 1.1	216	759	17	22/13	.29	.45/ .15	2.2	4.4/ 1.1	.8	280	61
86/10/14	24	15.4	28.6/ 2.9	215	758	17	21/12	.31	.50/ .16	2.0	2.9/ 1.1	.8	295	57
86/10/15	24	16.1	27.4/ 4.4	209	739	17	20/13	.32	.49/ .17	2.4	3.4/ 1.1	.7	278	67
86/10/16	24	16.2	26.4/ 7.0	203	724	17	20/13	.32	.48/ .20	2.4	3.9/ 1.0	.7	272	66
86/10/17	24	15.0	24.2/ 7.2	191	736	18	22/14	.32	.44/ .22	2.7	4.6/ 1.6	.5	175	72
86/10/18	24	14.1	17.3/10.0	151	714	25	35/19	.42	.52/ .25	5.8	8.3/ 1.8	5.5	327	12
86/10/19	24	14.2	19.5/ 8.8	121	588	31	84/18	.48	.97/ .37	3.8	5.3/ 1.6	2.6	337	40
86/10/20	24	13.2	21.3/ 5.7	195	687	52	89/20	.72	.98/ .46	2.3	4.9/ 1.0	1.5	334	30
86/10/21	24	13.7	23.9/ 3.8	189	690	43	81/16	.58	.75/ .40	2.1	4.1/ 1.2	.6	287	65
86/10/22	*23*	14.3	24.9/ 5.1	168	622	37	64/15	.53	.66/ .40	1.8	2.8/ 1.1	.9	305	49
86/10/23	24	15.8	25.4/ 7.0	182	679	31	60/14	.50	.65/ .36	2.0	3.2/ .9	.9	277	56
86/10/24	24	17.0	27.0/ 8.1	184	674	24	41/13	.43	.50/ .33	2.2	2.9/ 1.2	1.1	299	52
86/10/25	24	17.8	29.5/ 7.6	184	674	22	37/12	.42	.53/ .33	2.1	3.3/ 1.0	.8	310	60
86/10/26	24	18.1	27.9/ 8.4	158	606	21	35/13	.42	.51/ .34	2.0	3.3/ 1.0	.5	290	67
86/10/27	24	17.9	27.5/ 9.2	180	662	19	29/13	.39	.50/ .31	2.5	3.4/ 1.2	.8	300	65
86/10/28	24	18.1	26.0/ 8.1	124	545	19	29/14	.39	.47/ .31	2.1	2.9/ 1.0	.5	311	69
86/10/29	24	19.9	28.4/10.7	172	639	21	40/13	.46	.58/ .36	2.3	3.3/ 1.0	.4	154	72
86/10/30	24	16.8	23.5/ 8.6	106	453	23	37/17	.43	.52/ .33	2.6	7.6/ 1.2	1.5	323	50
86/10/31	24	16.5	20.8/12.0	168	653	17	20/15	.33	.38/ .27	5.6	7.4/ 3.9	4.7	335	27

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*--Continued.

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
												Magnitude (meters per second)	Direction	
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min		°az	Std. dev.
86/11/01	24	14.3	19.4/ 9.3	123	526	18	21/15	0.30	0.36/0.25	5.8	8.9/ 3.8	4.7	345	29
86/11/02	24	16.7	23.1/10.9	170	637	17	19/14	.33	.42/ .25	6.2	9.0/ 4.1	5.6	333	18
86/11/03	24	18.8	25.9/13.9	156	640	16	17/13	.35	.46/ .28	6.8	8.9/ 4.2	6.4	328	12
86/11/04	24	17.8	26.1/10.9	167	635	16	19/13	.34	.47/ .25	4.5	7.6/ 1.4	3.2	308	36
86/11/05	*23*	14.9	25.8/ 5.3	175	630	17	21/13	.31	.46/ .19	1.9	3.1/ 1.2	.5	300	67
86/11/06	24	12.1	15.4/ 7.0	165	626	18	20/17	.26	.30/ .21	7.0	12.2/ 2.1	6.5	334	15
86/11/07	24	7.7	15.0/ 2.1	134	537	20	24/17	.22	.30/ .17	2.6	4.2/ 1.3	1.7	303	37
86/11/08	24	8.1	16.4/ 1.0	161	614	24	41/16	.25	.31/ .17	2.9	5.2/ 1.3	2.4	329	20
86/11/09	24	8.2	19.2/-2.7	160	608	19	24/15	.22	.35/ .12	2.3	4.4/ 1.3	1.6	322	35
86/11/10	24	12.3	20.5/ 5.0	159	605	19	22/15	.28	.37/ .18	4.5	6.6/ 1.7	3.9	323	24
86/11/11	24	12.4	23.8/ 1.3	156	605	18	23/14	.28	.42/ .16	2.2	3.9/ 1.4	1.3	322	42
86/11/12	24	14.8	25.3/ 6.8	157	603	17	21/13	.30	.45/ .21	2.2	5.2/ 1.4	.7	311	61
86/11/13	24	11.9	22.3/ 1.9	154	593	19	24/14	.27	.40/ .16	2.4	4.0/ .9	.3	124	76
86/11/14	24	11.6	21.8/ 2.5	149	584	19	25/15	.27	.39/ .18	3.0	5.4/ 1.5	.6	121	70
86/11/15	24	11.8	21.1/ 4.3	134	526	25	37/16	.34	.42/ .22	2.2	2.8/ .9	1.1	307	55
86/11/16	24	12.8	22.2/ 6.0	140	565	34	47/20	.48	.57/ .40	2.0	3.0/ 1.0	.9	287	57
86/11/17	24	13.3	21.9/ 6.4	115	517	49	82/27	.72	1.20/ .53	2.1	2.9/ 1.1	.8	301	59
86/11/18	24	12.6	14.4/11.0	37	191	85	87/81	1.25	1.35/1.15	1.6	3.3/ .4	.7	154	59
86/11/19	24	14.3	21.4/10.0	131	555	71	87/37	1.12	1.25/ .94	2.2	4.7/ .9	.9	310	57
86/11/20	24	12.5	21.2/ 5.7	141	555	61	84/27	.83	.93/ .69	1.9	3.3/ 1.1	.2	273	75
86/11/21	24	12.5	19.7/ 7.0	117	538	52	84/18	.70	1.12/ .29	4.2	9.6/ 1.1	3.8	337	19
86/11/22	24	12.1	18.5/ 5.8	140	553	21	32/16	.30	.36/ .27	6.3	10.4/ 3.3	5.7	331	14
86/11/23	24	10.7	17.1/ 5.9	138	549	25	42/17	.32	.39/ .28	4.6	8.6/ 1.5	4.1	345	21
86/11/24	24	9.2	18.3/ 2.7	139	550	38	60/17	.41	.49/ .32	2.0	3.2/ 1.0	.3	310	73
86/11/25	24	13.4	18.3/ 8.5	133	547	23	35/16	.35	.41/ .24	6.1	9.1/ 3.5	5.7	329	14
86/11/26	24	11.1	20.2/ 4.8	137	552	18	21/15	.25	.36/ .18	3.1	7.2/ 1.3	1.9	320	44
86/11/27	24	7.8	18.0/ 0.6	106	413	21	27/16	.22	.33/ .17	2.0	2.9/ .8	.9	305	56
86/11/28	24	7.9	17.8/ .1	106	486	21	25/16	.23	.33/ .16	2.2	3.4/ 1.2	.7	301	65
86/11/29	24	9.1	14.5/ 3.7	130	531	22	27/17	.25	.30/ .20	5.2	12.4/ 1.7	4.4	331	27
86/11/30	24	8.2	15.9/ 2.1	136	543	23	32/16	.25	.30/ .16	5.0	10.3/ 1.4	4.5	314	16

TABLE 3.--*Summary of meteorological data collected at study site in 1986. Daily mean, maximum, minimum values were determined from hourly measurements*--Continued.

Date	Number of hourly values	Temperature (degrees Celsius)		Solar radiation (watts per square meter)		Relative humidity (percent)		Vapor pressure (kilopascals)		Windspeed (meters per second)		Wind vector		
												Magnitude (meters per second)	Direction	
		Mean	Max/min	Mean	Max	Mean	Max/min	Mean	Max/min	Mean	Max/min		°az	Std. dev.
86/12/01	24	6.8	19.3/-1.3	135	545	21	28/15	0.22	0.34/0.15	1.8	2.9/ 0.9	0.9	306	49
86/12/02	24	6.7	18.6/-1.9	120	474	20	25/15	.21	.34/ .14	2.0	2.9/ 1.2	.9	313	59
86/12/03	24	7.0	19.5/-1.9	131	531	20	26/15	.21	.35/ .14	2.0	2.8/ 1.2	.9	306	58
86/12/04	24	6.7	13.6/ 1.9	40	180	21	24/17	.21	.27/ .16	1.8	2.8/ .8	1.1	304	36
86/12/05	24	7.0	13.6/ 1.5	59	264	24	29/18	.24	.30/ .18	2.2	3.6/ 1.1	.8	307	63
86/12/06	24	8.8	11.8/ 6.5	39	204	53	87/31	.60	.92/ .31	2.1	4.4/ 1.0	.6	308	67
86/12/07	24	8.7	12.1/ 6.8	51	314	51	84/32	.56	.84/ .41	5.8	9.0/ 2.4	5.0	319	24
86/12/08	24	8.4	15.6/ 2.8	126	511	38	53/19	.41	.46/ .35	4.6	9.7/ 1.5	3.6	319	27
86/12/09	24	8.5	13.8/ 2.8	127	517	29	54/18	.31	.40/ .21	4.6	7.2/ 1.6	3.8	333	22
86/12/10	24	4.2	12.8/-2.4	128	522	25	44/17	.21	.26/ .16	2.5	5.5/ 1.0	.5	344	71
86/12/11	24	3.6	14.3/-4.5	127	521	35	63/17	.25	.28/ .19	2.0	3.1/ 1.0	.1	35	78
86/12/12	24	3.8	13.8/-3.8	124	511	36	60/17	.27	.31/ .21	1.9	2.9/ 1.1	.9	300	55
86/12/13	24	3.7	12.5/-3.4	90	402	37	58/18	.28	.32/ .23	1.9	2.7/ .6	1.0	292	53
86/12/14	24	3.7	13.1/-3.1	101	488	37	55/18	.27	.32/ .23	2.0	3.0/ 1.3	.6	288	66
86/12/15	24	3.5	11.5/-3.0	61	260	42	57/21	.32	.38/ .27	2.1	3.7/ .8	1.0	307	56
86/12/16	24	5.7	13.5/-1.6	69	369	52	81/27	.45	.54/ .39	1.6	2.2/ .9	.9	330	43
86/12/17	24	7.0	17.5/- .1	120	497	44	71/18	.40	.49/ .32	1.9	2.8/ 1.1	1.4	319	29
86/12/18	24	6.6	14.6/ .4	102	460	47	64/26	.44	.52/ .36	2.2	4.1/ 1.5	.1	234	79
86/12/19	24	8.7	13.9/ 4.6	80	404	58	79/42	.65	.76/ .54	2.0	3.5/ .8	.1	308	78
86/12/20	24	8.1	12.2/ 5.0	49	298	72	88/54	.77	.99/ .60	3.4	7.1/ .6	2.4	328	39
86/12/21	24	8.6	14.4/ 2.7	122	496	48	68/27	.53	.60/ .42	4.6	7.5/ 1.1	4.3	318	12
86/12/22	24	5.0	12.7/- .7	99	509	64	85/28	.53	.64/ .41	1.8	2.6/ 1.0	.8	300	55
86/12/23	24	8.0	13.1/ 3.6	67	418	50	77/29	.52	.62/ .42	3.6	7.0/ 1.1	3.3	318	14
86/12/24	*4*	6.1	7.0/ 5.2	0	0	43	43/43	.41	.43/ .39	6.5	8.3/ 5.6	6.3	308	1
86/12/25	*0*	--	-- --	--	--	--	--	--	-- --	--	-- --	--	--	--
86/12/26	*0*	--	-- --	--	--	--	--	--	-- --	--	-- --	--	--	--
86/12/27	*21*	6.4	15.3/-2.3	141	507	45	81/18	.38	.47/ .28	2.0	4.2/ 1.0	1.0	300	52
86/12/28	24	9.9	15.8/ 5.4	123	504	29	43/18	.35	.41/ .24	5.1	7.5/ 2.4	4.7	322	14
86/12/29	24	7.2	17.6/ .0	120	492	29	48/16	.28	.34/ .22	2.0	3.4/ 1.1	.8	297	59
86/12/30	24	5.0	16.3/-3.0	125	530	30	47/16	.25	.31/ .20	1.8	2.6/ 1.0	.7	315	59
86/12/31	*18*	5.5	12.8/-1.0	111	469	31	44/18	.26	.29/ .23	1.5	2.0/ .9	.6	282	59