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ATMOSPHERIC OBSERVATIONS FOR STS-1 LANDING

By Robert E. Turner, James E. Arnold, and Gregory S. Wilson
Space Sciences Laobratory

May 1981

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George C. Marshall Space Flight Center
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16. ABSTRACT

A summary of synoptic weather conditions existing over the western United States is given for the time of Shuttle descent into Edwards Air Force Base, California. The techniques and methods used to furnish synoptic atmospheric data at the surface and aloft for flight verification of the STS-1 Orbiter during its descent into Edwards Air Force Base are specified. Examples of the upper-level data set are given.

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ATMOSPHERIC OBSERVATIONS FOR STS-1 LANDING

I. INTRODUCTION

The successful launch and landing of the Space Shuttle concluded the first phase of NASA's space vehicle/flight program. This report presents a summary of synoptic conditions and the atmospheric observations taken in support of the Sonic Boom Measurement Program and flight verification of the STS-1 Orbiter.

The Space Shuttle STS-1 was launched from Complex 39A at the Kennedy Space Center, Florida, into a nominal 150/150 nautical mile altitude circular orbit on April 12, 1981.

The deorbit maneuver was initiated at approximately 55 hours, 31 minutes, ground elapsed time during the 36th orbit, with subsequent landing on Rogers Lake bed at Edwards Air Force Base, California, on April 14, 1981. Runway 23 was the primary runway, 17 was the backup, and 04, the alternate.

This document is written under the requirement Level II PRCB, dated May 5, 1980, Request S-13705A, to furnish atmospheric data at the surface and aloft for flight verification of STS-1 Orbiter during its descent into Edwards Air Force Base, California.

II. GENERAL SYNOPTIC CONDITIONS AT LANDING TIME

Deorbit maneuvers for STS-1 were initiated at 1731 GMT April 14, 1981, while passing over the western portion of the North Pacific Ocean. The Shuttle Orbiter then descended into the atmosphere, passing rapidly through the stratosphere and then the troposphere over Southern California. It landed at 1818 GMT at Edwards Air Force Base. This section describes the general synoptic conditions during this period. These conditions were derived using both satellite imagery (visible and infrared data from the GOES-W satellite) and conventional surface and upper-level rawinsonde measurements of temperature, winds, moisture, and pressure. Analysis of these data was performed by the Man Computer Interactive Data Access System (McIDAS) in the Space Sciences Laboratory of the Marshall Space Flight Center.

Overall synoptic conditions for the STS-1 landing were optimal considering winds aloft and at the surface as well as visibility along the glide slope. The central and western United States was dominated by a large

high pressure cell, as shown in Figure 1. A major cyclone had moved through the central U.S. and was located over the Great Lakes. Aviation weather in that region was poor, with low ceilings, poor visibility, and moderate precipitation developing along the frontal zone and around the low pressure area. Fortunately, this system had developed and moved east of the landing site 24 to 36 hr prior to landing.

Figures 2 through 4 show infrared satellite images over the western United States at 1815 GMT. State and geographical boundaries are superimposed. These figures show that skies were completely cloudless both over and west of Edwards Air Force Base. This can be supported by image enhancement of the black and white image in Figure 3 where clouds would be represented by dark green, reds, and white. The 500 mb ($\sim$ 5000 m/18,000 ft) wind barbs (m/s) and a geopotential height analysis (decameters) superimposed in Figure 4 show very light wind conditions ($<$ 10 m/s) in the middle troposphere from the southwest, which is supported by the weak gradient of geopotential height over the landing area.

This pattern of weak winds and gradients in the height field extended throughout the troposphere. This is shown in Figures 5 through 8, which display wind barbs and geopotential height analyses for 700 mb ($\sim$ 3000 m/10,000 ft), 500 mb ($\sim$ 5000 m/18,000 ft), 300 mb ($\sim$ 9000 m/30,000 ft), and 200 mb ($\sim$12,000 m/40,000 ft), respectively, over the western United States. No frontal zones were present along the glide slopes, but a weak upper-level disturbance with high cloudiness was moving northeast through Arizona and New Mexico. This system had passed over the landing site during the previous 24 hr period.

Figure 9 shows a full-resolution (1 km) visible picture of the Edwards area (small cross) also at 1815 GMT on April 14. Snow over the southern Sierra Mountains is seen toward the upper left, and low cloudiness ($<$ 2000 ft AGL) is evident over the cold ocean water off the southern California coast. Skies were clear over and surrounding the landing site. Light surface winds and excellent visibility prevailed along the California portion of the final ground track.

Figure 10 is a plot of the vertical distribution of winds (m/s), temperature (solid line in °C), and dew-point temperature (dashed line in °C) at 1200 GMT April 14 taken at Edwards Air Force Base. The profiles extend from the surface to 100 mb ($\sim$ 17,000 m/55,000 ft). Winds speeds are light ($<$ 15 m/s) at all levels associated with weak vertical wind shears aloft. The temperature structure is statically stable or near neutral at all levels. Turbulence in clear air was, therefore, unlikely. The temperature/dew-point temperature spread is such that relative humidities were less than 50 percent at all levels.

In summary, landing weather for STS 1 was unusually optimal considering the active nature of weather disturbances that traverse that area during the spring season.

III. DISCUSSION OF BASIC DATA

A. Collection of the Data and the Data Acquisition System

Past experience gained on Apollo and Skylab programs has shown that it is necessary to have atmospheric data to verify the analytical techniques used for engineering analysis. For this reason, atmospheric data at the surface and aloft were obtained by using the Rawinsonde System. One Rawinsonde System was placed at Wheeler Ridge and a second one at Tehachapi, California. These sets were positioned along the STS-1 reentry track shown in Figure 11. The requirements to collect atmospheric data approximately 2 hr before landing and at the time of landing from these two locations have been met.

The Rawinsonde System is a transportable radio direction finder designed to track a balloon-borne radiosonde automatically. A radiosonde signal containing information about the atmosphere in the form of an amplitude or frequency modulation data signal is received, amplified, and detected by this system. The detected signal is passed to separate equipment in the system where it is recorded. By reference to calibration data for the radiosonde, this recorded information is converted to values of temperature, humidity, and pressure. Recordings of time versus progressive changes of the elevation and azimuth positions of the ascending balloon package, as determined by tracking of the signal from the radiosonde, are made so that they can later be converted to wind speed and direction.

The radiosonde consists of a transmitter, modulator, antenna, battery, and pressure, temperature, and humidity sensing elements. The radiosonde, parachute, and train weigh approximately 2 kg (4 lb) and can be carried to an altitude of approximately 30 km by a helium-filled balloon. The battery furnishes power to the modulator and transmitter. The transmitter operates in the 1660 to 1700 MHz band; and its carrier is amplitude modulated by an audio-frequency pulse, the rate of which is determined by the pressure, temperature, and humidity sensing elements.

The Rawinsonde antenna automatically tracks the balloon-borne radiosonde by continuous homing on the radiosonde signal to horizontal distances of approximately 200 km and altitudes of up to 30 km. The equipment recorder records the elevation and azimuth angles of the position of the radiosonde versus time.

B. Methods of Processing

The procedure used to compute the soundings is described by Fuelberg [1] and Turner [2]. All raw data keypunched were checked for errors by calculating centered differences on the input data. Additional checks include centered differences on computed winds and checks on lapse rates of computed temperatures and dew points. Suspected errors were checked with the original recorder chart information and the appropriate corrections made.

The final data set consists of data computed at each pressure contact as well as data at 30-sec intervals. Thermodynamic quantities were computed at each pressure contact, while winds were computed from the available 30-sec interval angle data by means of centered finite differences. Winds were subsequently interpolated to each contact.

The following procedures were employed in the processing of these data which differ from those described by Fuelberg [1]:

1) Humidity values, including dew-point temperature, were computed only at temperatures above −40°C; at temperatures below −40°C, humidity values are missing and are indicated by a field of nines. Moisture values were computed if the relative humidity exceeded 1 percent. If the value was below 1 percent, it was set equal to 1 percent and used in the computation of other moisture variables.

2) Winds based on low elevation angles are denoted by asterisks. One asterisk denotes angles less than 10° but greater than 6°, while two asterisks denote angles less than 6°. Caution must be exercised in the use of data at low elevation angles, since it is subject to rather large RMS errors.

3) Wind direction and speed were determined for contact levels by interpolating time values.

In processing the data, corrections were made for any errors made in recording the observational data.

IV. DISCUSSION OF UPPER AIR DATA

A. Accuracy Estimates

Estimates of the RMS errors in the wind and thermodynamic quantities of the STS-1 descent rawinsonde soundings are the same as those given by Fuelberg [1]. The error estimates for thermodynamic variables are presented in Table 1.

The RMS errors for wind speed and direction are difficult to describe since they are a function of tracking geometry and other factors. Maximum RMS errors for winds (speed and direction) computed at 30 sec intervals (based on the worst geometric tracking configuration) for 10 and 40 degree elevation angles are presented in Table 2. The accuracy of the wind data at pressure contacts is greater than that stated for the 30-sec winds because of the added smoothing and interpolation performed. In addition, the errors stated for the 30-sec winds were maxima for the stated conditions.

TABLE 1. ESTIMATES OF THE RMS ERRORS IN THERMODYNAMIC QUANTITIES

Parameter	Approximate RMS Error
Temperature	0.5°C
Pressure	1.3 mb from surface to 400 mb 1.1 mb between 400 and 100 mb 0.7 mb between 100 and 10 mb
Humidity	10 percent
Pressure Altitude	10 gpm at 500 mb 20 gpm at 300 mb 50 gpm at 50 mb

TABLE 2. ESTIMATES OF RMS ERRORS IN WIND DATA

Pressure mb	RMS Errors (ms^{-1}) in Speed		RMS Errors (degree) in Direction	
	10-degree elevation	40-degree elevation	10-degree elevation	40-degree elevation
700	2.5	0.5	9.5	1.3
500	4.5	0.8	13.4	1.8
300	7.8	1.0	18.0	2.5

B. Tabulated Data

An example of the contact data is given in Table 3, with the explanation of column headings in Table 4. The first line of data for the time 0.0 min is surface data. The three numbers in the upper right-hand corner are the number of pressure levels computed, the minimum pressure obtained (mb) and an identifier with the value 0 for 30-sec angle input and 1 for 1-min angle input.

The contact data and the 30-sec data are presented in Appendices A and B.

TABLE 3. EXAMPLE OF CONTACT DATA

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1815 GMT

160 12. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
0.0	6.0	168.0	1002.0	28.6	8.0	330.0	.5	.3	-.4	295.6	313.7	6.7	39.0	0.0	0.
.2	7.0	194.0	999.0	21.4	8.0	286.7	.5	.4	-.1	294.6	312.8	6.8	42.1	.0	78.
.7	8.0	181.0	989.0	20.3	7.4	283.3	.7	.6	-.2	294.4	312.0	6.6	43.5	.0	78.
1.0	9.0	358.5	979.0	19.2	6.6	280.9	.9	.9	-.2	294.1	311.0	6.3	44.0	.0	85.
1.3	10.0	465.4	968.0	17.9	5.7	287.5	1.0	.9	-.3	293.8	309.9	6.0	44.8	.1	91.
1.7	11.0	567.1	957.0	17.1	5.7	291.7	.7	.6	-.3	293.9	310.2	6.0	47.2	.1	97.
2.1	12.0	652.6	947.0	16.3	4.6	257.8	.2	.2	.0	294.0	309.2	5.6	46.0	.1	101.
2.5	13.0	751.8	936.0	15.4	4.2	198.2	.6	.2	.6	294.1	309.1	5.5	47.0	.1	96.
2.9	14.0	842.9	926.0	15.0	4.0	169.6	.3	-.1	.3	294.6	310.5	5.9	50.4	.1	84.
3.2	15.0	934.0	916.0	14.6	4.5	92.7	.2	-.2	.0	295.1	310.8	5.8	50.5	.1	82.
3.6	16.0	1027.6	906.0	14.3	4.2	122.1	.2	-.2	.1	295.6	311.2	5.7	50.7	.1	87.
4.0	17.0	1121.3	896.0	13.9	3.9	194.9	2.2	.6	2.1	296.2	311.6	5.7	50.9	.1	95.
4.3	18.0	1215.9	886.0	13.5	3.6	167.4	3.4	-.7	3.3	296.7	312.1	5.6	51.2	.1	52.
4.6	19.0	1321.2	875.0	13.9	3.8	151.3	4.9	-2.4	4.3	298.2	314.0	5.8	50.5	.2	29.
5.0	20.0	1418.8	865.0	15.9	2.5	132.8	7.2	-5.3	4.9	301.3	316.2	5.3	40.7	.2	355.
5.3	21.0	1517.1	855.0	15.6	-6.7	134.5	8.0	-5.7	5.6	302.0	310.0	2.7	20.8	.4	349.
5.7	22.0	1606.7	846.0	14.8	-7.3	134.9	8.3	-5.9	5.9	302.1	309.8	2.6	20.8	.6	331.
6.1	23.0	1707.0	836.0	13.9	-7.5	133.4	7.8	-5.7	5.4	302.1	309.7	2.6	21.9	.8	327.
6.5	24.0	1808.2	826.0	13.1	-7.6	131.3	7.3	-5.5	4.8	302.3	310.0	2.6	22.9	.9	324.
6.9	25.0	1910.3	816.0	12.3	-7.7	129.0	7.8	-6.1	4.9	302.6	310.3	2.6	23.9	1.1	322.
7.3	26.0	2013.5	806.0	11.9	-7.6	128.5	8.2	-6.4	5.1	303.2	311.1	2.7	24.8	1.3	320.
7.7	27.0	2117.7	796.0	10.4	-8.4	127.7	8.4	-6.7	5.2	302.7	310.2	2.6	25.7	1.5	318.
8.2	28.0	2222.7	786.0	9.5	-8.4	125.9	8.5	-6.9	5.0	302.8	310.4	2.6	27.4	1.7	317.
8.6	29.0	2328.7	776.0	8.8	-8.3	125.4	8.7	-7.1	5.0	303.1	310.9	2.6	28.9	1.9	315.
9.0	30.0	2425.0	767.0	7.5	-9.0	126.5	8.7	-7.0	5.2	302.8	310.2	2.5	29.7	2.2	315.
9.5	31.0	2533.0	757.0	7.3	-8.3	126.5	9.1	-7.3	5.4	303.7	311.7	2.7	31.8	2.4	314.
9.9	32.0	2642.1	747.0	5.9	-9.6	127.3	9.3	-7.4	5.6	303.4	310.7	2.5	31.8	2.6	313.
10.3	33.0	2741.2	738.0	4.7	-10.8	128.5	9.0	-7.0	5.6	303.1	309.9	2.3	31.5	2.9	313.
10.8	34.0	2852.2	728.0	3.9	-11.5	132.4	8.4	-6.2	5.7	303.4	309.9	2.2	31.5	3.1	312.
11.3	35.0	2953.1	719.0	3.0	-12.9	140.6	8.7	-5.6	6.7	303.5	309.4	2.0	29.7	3.4	313.
11.7	36.0	3055.1	710.0	3.0	-14.4	146.9	9.6	-5.2	8.0	304.6	309.9	1.8	26.3	3.6	313.
12.1	37.0	3169.8	700.0	2.2	-14.6	153.3	10.3	-4.6	9.2	304.9	310.3	1.8	27.5	3.8	314.
12.5	38.0	3274.1	691.0	1.4	-16.0	160.6	9.9	-3.3	9.3	305.1	310.0	1.6	25.9	4.1	316.
13.0	39.0	3379.5	682.0	.7	-18.0	167.3	8.4	-1.8	8.2	305.6	309.5	1.3	21.4	4.3	317.
13.4	40.0	3486.1	673.0	.6	-21.7	166.6	7.4	-1.7	7.2	306.5	309.7	1.0	16.9	4.5	319.
13.8	41.0	3606.1	663.0	-.1	-22.8	165.1	6.2	-1.6	6.0	307.1	310.1	.5	16.0	4.6	320.
14.3	42.0	3703.0	655.0	-1.2	-23.7	162.5	5.1	-1.5	4.8	306.9	309.7	.9	16.1	4.7	323.
14.8	43.0	3813.1	646.0	-2.2	-24.6	159.9	4.6	-1.6	4.3	307.1	309.7	.8	15.9	4.9	321.
15.2	44.0	3924.3	637.0	-3.1	-25.3	156.8	4.3	-1.7	3.9	307.3	309.7	.8	15.9	5.0	321.
15.7	45.0	4036.8	628.0	-4.0	-26.2	149.3	4.3	-2.2	3.7	307.5	309.8	.7	15.8	5.1	322.
16.1	46.0	4150.5	619.0	-4.8	-26.8	147.4	4.7	-2.5	4.0	307.8	310.1	.7	15.8	5.2	322.
16.6	47.0	4265.6	610.0	-5.1	-27.1	153.1	5.4	-2.4	4.8	308.0	311.0	.7	15.8	5.4	322.
17.1	48.0	4382.2	601.0	-5.5	-27.4	161.5	6.0	-1.9	5.7	309.6	311.8	.7	15.8	5.5	322.
17.5	49.0	4500.4	592.0	-6.1	-27.5	168.6	6.0	-1.2	5.8	310.2	312.4	.7	16.4	5.7	323.
17.9	50.0	4606.8	584.0	-6.7	-27.7	176.9	5.3	-.3	5.2	310.7	312.9	.7	16.9	5.8	324.

* BY SPEED MEANS ELEVATION ANGLE BETWEEN 6 AND 10 DEG
* BY TEMP MEANS TEMPERATURE OR TIME HAVE BEEN INTERPOLATED
** B/ SPEED MEANS ELEVATION ANGLE LESS THAN 6 DEG

TABLE 4. EXPLANATION OF COLUMN HEADINGS OF TABULATED SOUNDING DATA FOR THE STS-1 ORBITER DURING ITS DESCENT AND LANDING

TIME (MIN)	Time after balloon release.
CNTCT	Contact number.
HEIGHT (GPM)	Height of corresponding pressure surface in geopotential meters.
PRES (MB)	Pressure in millibars.
TEMP (DG C)	Ambient temperature in degrees Celsius. NOTE: An asterisk indicates that time from release and/or temperature were linearly interpolated.
DEW PT (DG C)	Dew-point temperature in degrees Celsius.
DIR (DG)	Wind direction measured clockwise from true north and is the direction from which the wind is blowing.
SPEED (M/SEC)	Scalar wind speed in meters per second. NOTE: An asterisk indicates that wind quantities are based on an elevation angle that is between 10° and 6°. A double asterisk indicates that the elevation angle is less than 6°.
U COMP (M/SEC)	The E-W wind component, positive toward the east and negative toward the west.
V COMP (M/SEC)	The N-S wind component, positive toward the north and negative toward the south.
POT T (DG K)	Potential temperature in degrees Kelvin.
E POT T (DG K)	Equivalent potential temperature in degrees Kelvin.
MX RTO (GM/KG)	Mixing ratio in grams per kilogram.
RH (PCT)	Relative humidity in percent.
RANGE (KM)	Distance balloon is from release point along a radius vector.
AZ (DG)	Direction toward balloon measured clockwise from true north.

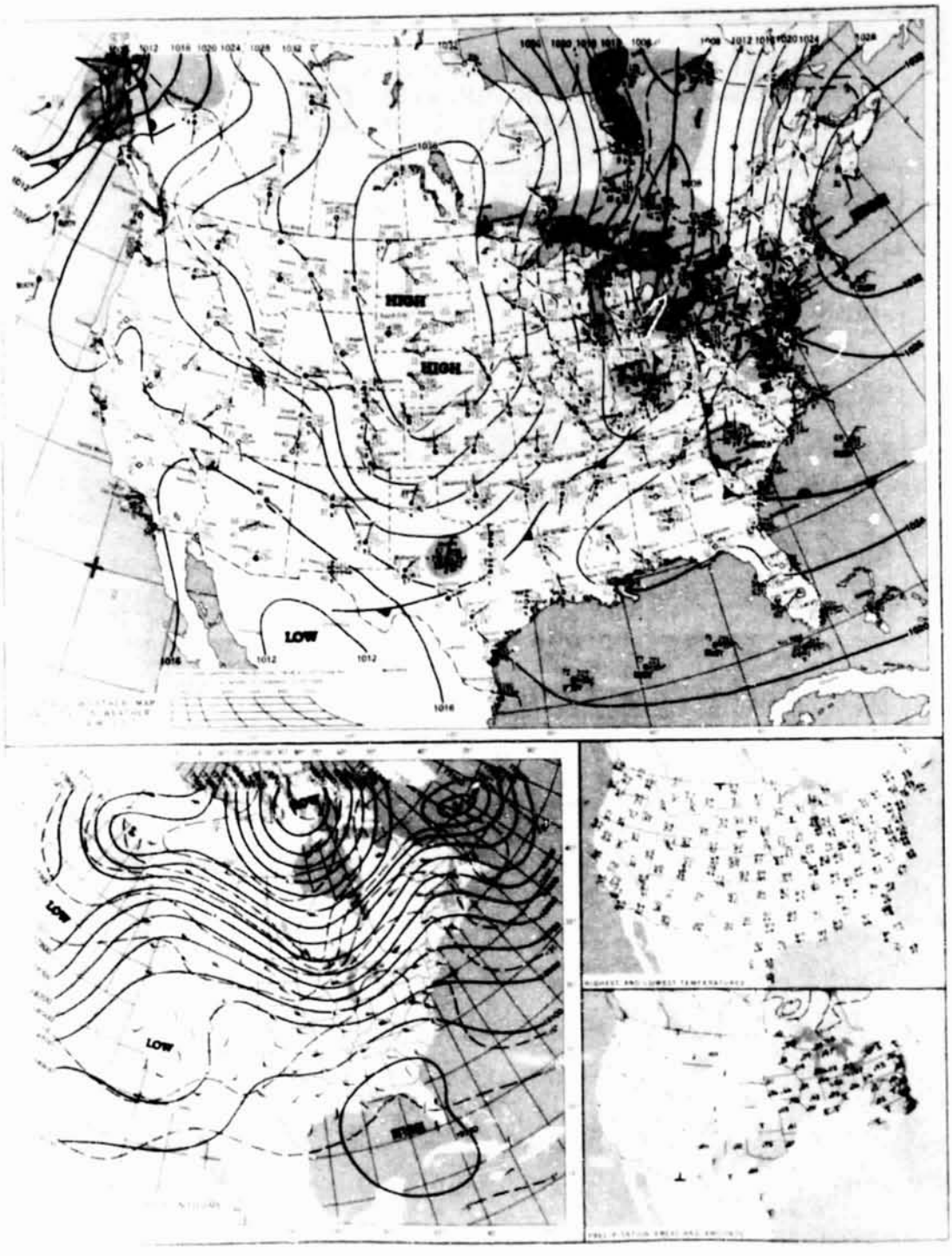

Figure 1. Large-scale analysis of weather conditions over North America and the U.S., including surface map, 500 mb (approximately 18,000 ft) height contours high and low surface temperatures, and 24-hr precipitation map for 1200 GMT 14 April 1981.

Figure 2. GOES W infrared satellite image at 1815 GMT 14 April 1981. Clouds are shown in white.

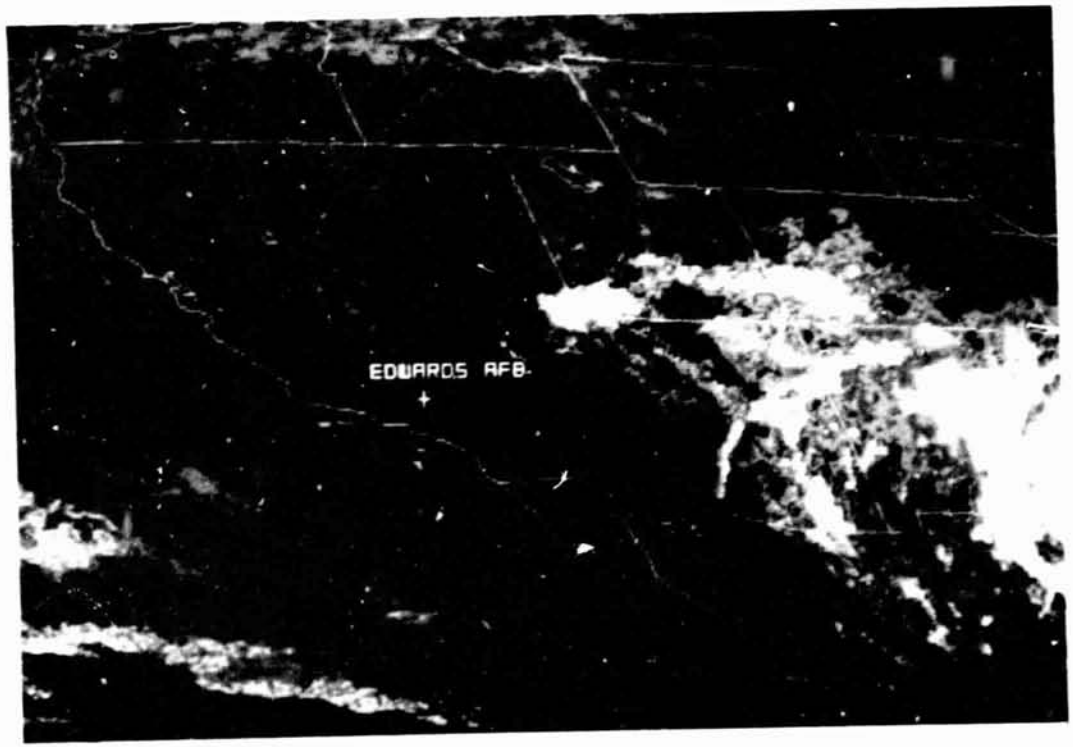

Figure 3. GOES-W image-enhanced infrared satellite image at 1815 GMT 14 April 1981.

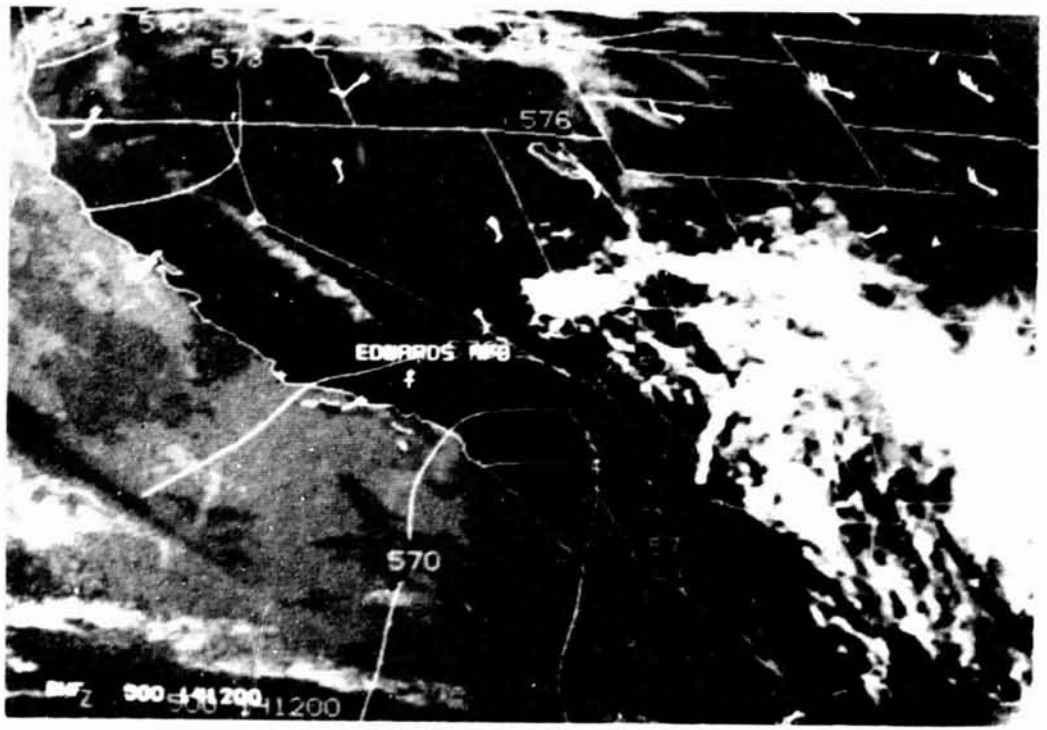

Figure 4. GOES-W infrared satellite image at 1815 GMT 14 April 1981. Superimposed are wind barbs (m/s) and a geopotential height analysis (m) for 500 mb (~18,000 ft) from data at 1200 GMT 14 April 1981.

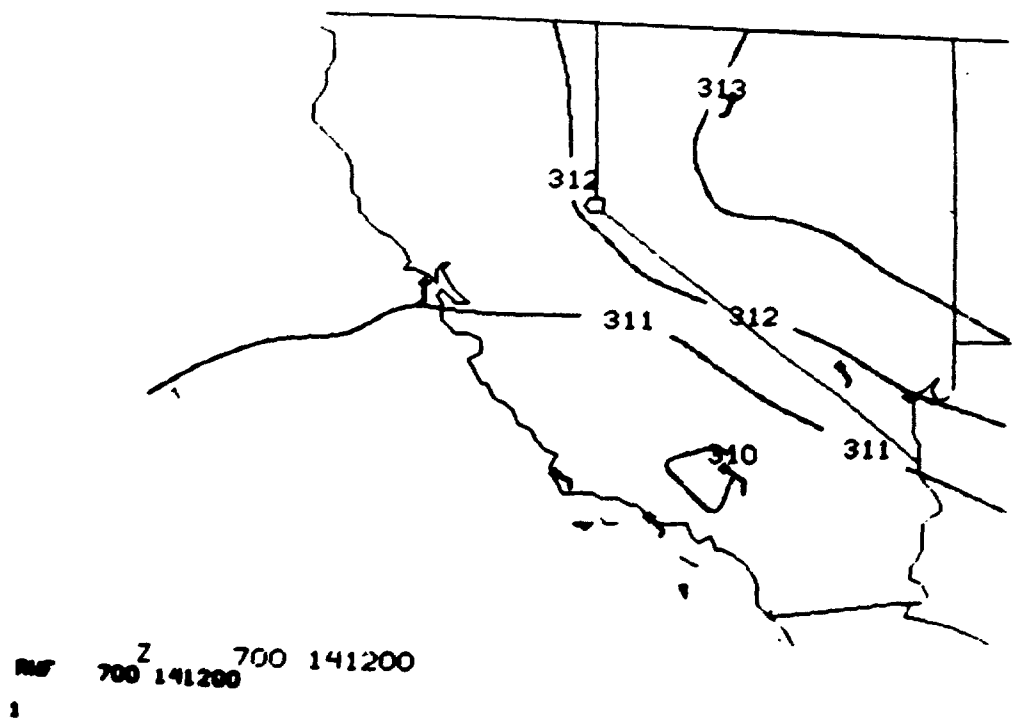

Figure 5. 700 mb (~10,000 ft) winds (m/s) and geopotential height analysis (m) from data at 1200 GMT 14 April 1981.

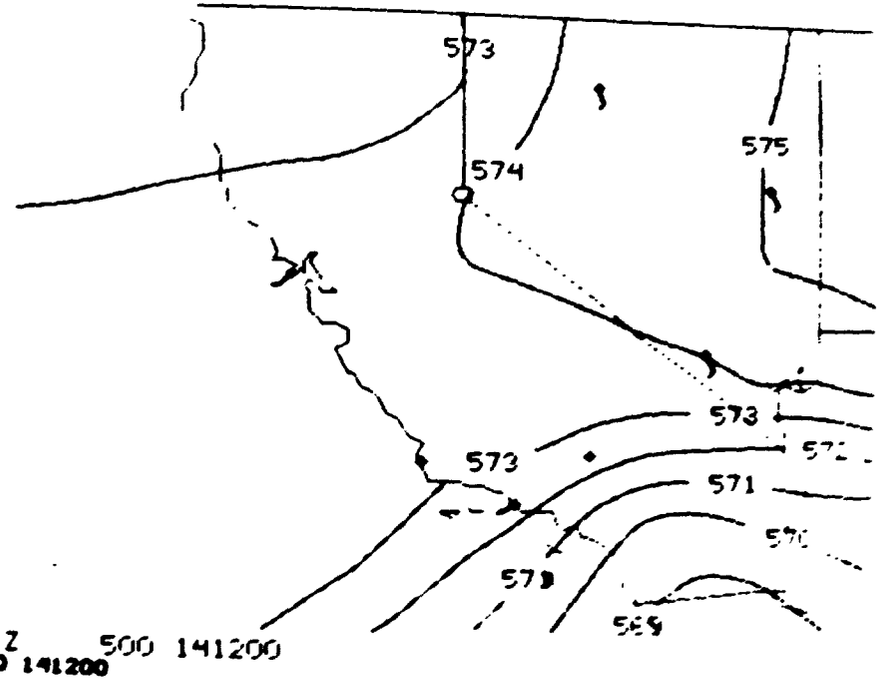

Figure 6. 500 mb (~18,000 ft) winds (m/s) and geopotential height analysis (m) from data at 1200 GMT 14 April 1981.

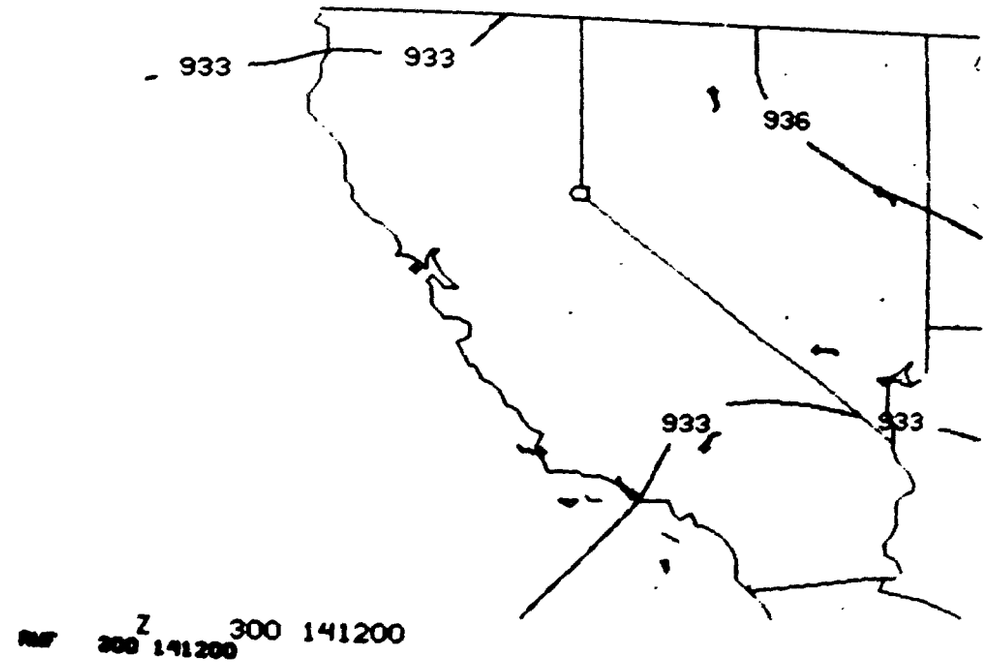

Figure 7. 300 mb (~30,000 ft) winds (m/s) and geopotential height analysis (m) from data at 1200 GMT 14 April 1981.

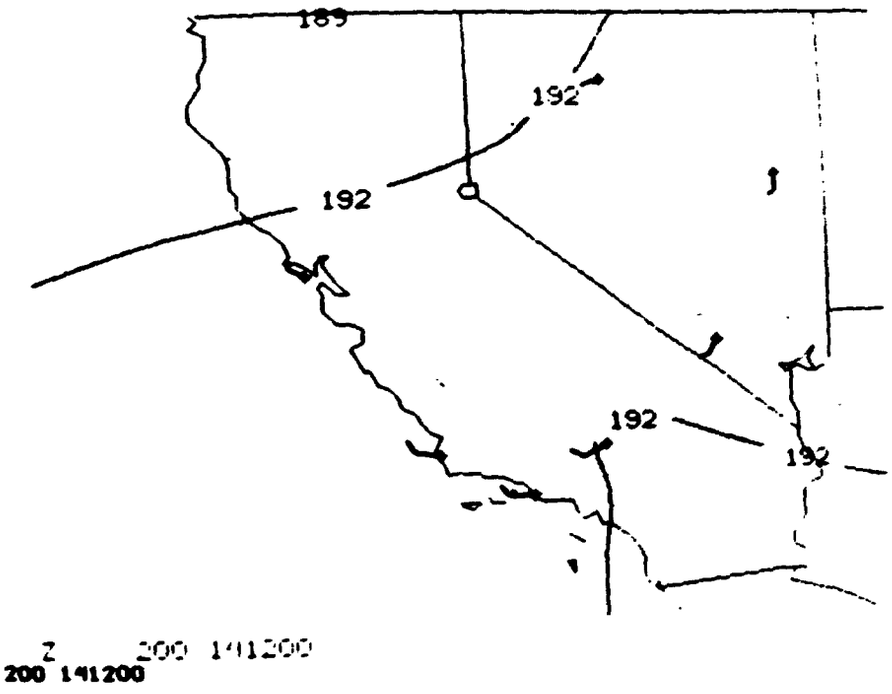

Figure 8. 200 mb (∿55,000 ft) winds (m/s) and geopotential height analysis (m) from data at 1200 GMT 14 April 1981.

Figure 9. Visible GOES-W satellite image at 1815 GMT 14 April 1981 over southern California.

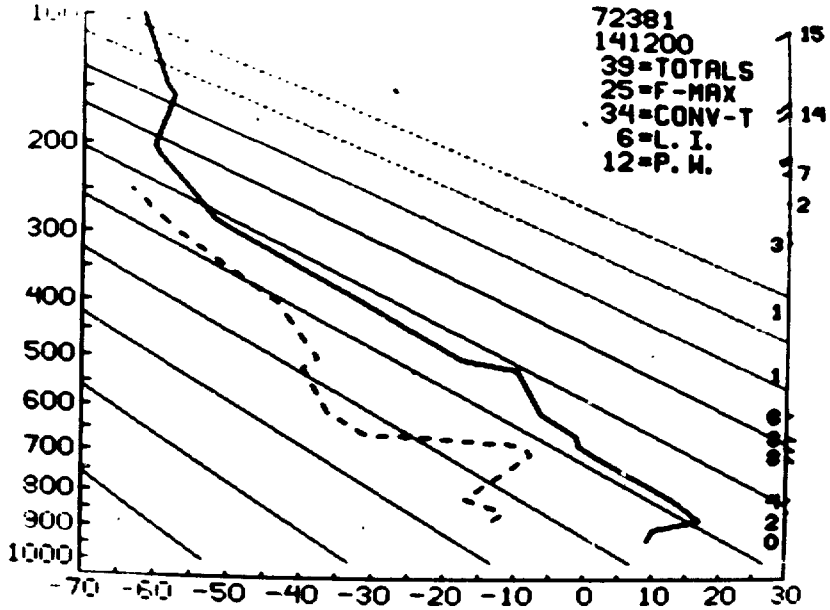

Figure 10. Vertical profiles of wind barbs (m/s), temperature (solid line in °C), and dew-point temperature (dashed line in °C) from the surface to 100 mb (≈55,000 ft) at 1200 GMT 14 April 1981 for Edwards Air Force Base.

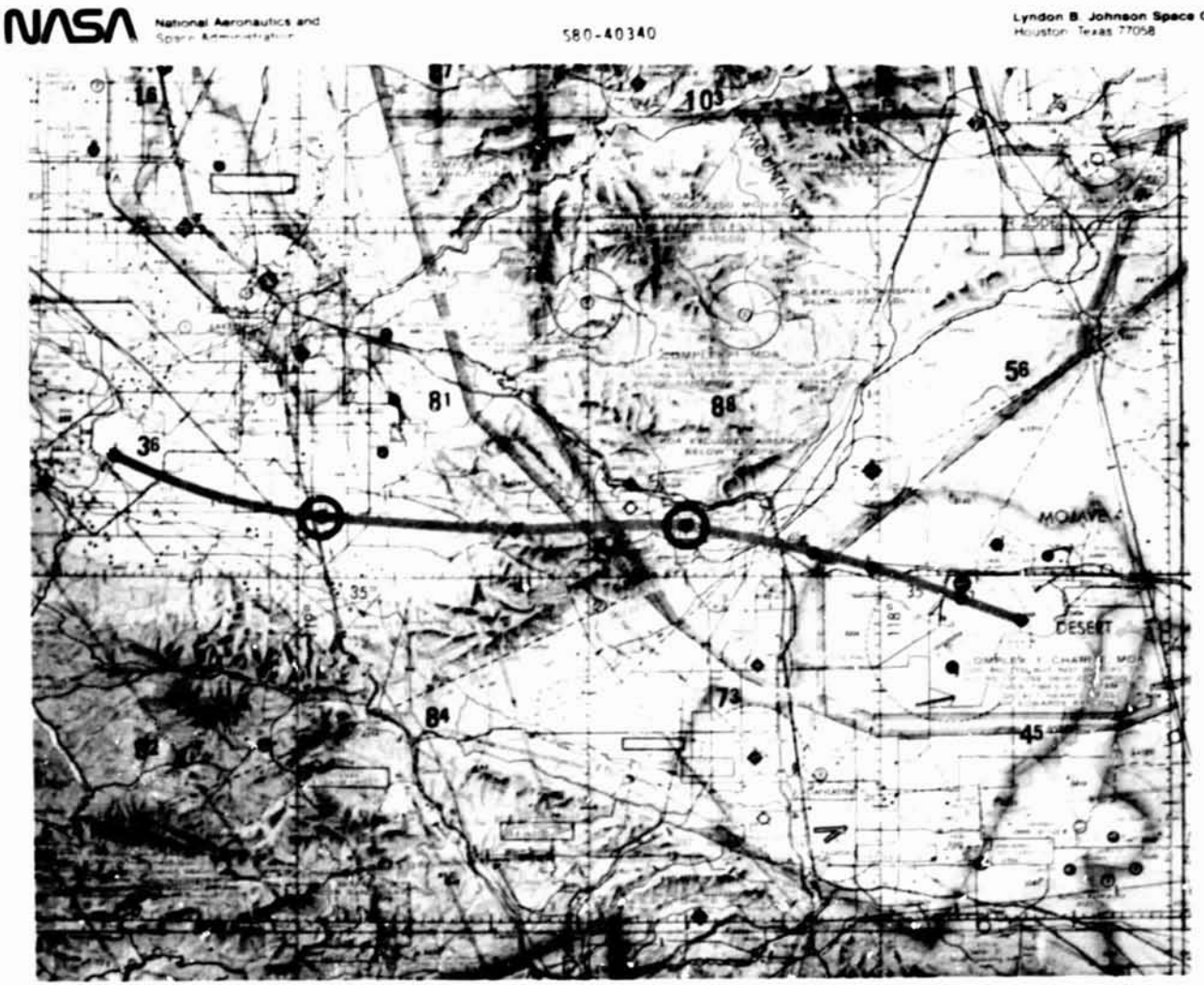

Figure 11. Ground track of STS-1 landing trajectory over northern California. Rawinsonde sites are located at large black circles. Wheeler Ridge is on the left side of the track, while Tehachapi is on the right.

REFERENCES

1. Fuelberg, H.E.: Reduction and Error Analysis of the AVE II Pilot Experiment Data. NASA Contractor Report CR-120496. Marshall Space Flight Center, Alabama, 1974.

2. Turner, R.E.: The Mechanics of Atmospheric Systems Derived Through Vertical and Horizontal Analysis of Parametric Data. NASA Technical Paper 1072. Marshall Space Flight Center, Alabama, 1977.

APPENDIX A

Contact Data

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1535 GMT

158 13. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
0.0	6.7	168.0	1001.4	17.0	0 7	350.0	.5	.1	-.5	290.0	308.6	7.1	58.0	0.0	0.
.2	7.0	205.5	997.0	16.3	4.0	300.3	.4	.3	-.2	289 7	304.1	5.4	46.6	.0	132.
.6	8.0	299.7	986.0	15.4	4 2	286.3	.3	3	-.1	289.0	303.8	5.3	47.1	.0	125.
.9	9.0	386.1	976.0	14.6	3 7	230.5	.3	.3	.2	289.0	33.5	5.1	47.7	.0	122
1.2	10.0	481.0	965.0	14.1	3.7	239 7	1.0	.9	.5	290.2	303.7	5.0	48.3	.0	86.
1.5	11.0	576.6	954.0	14.1	3.4	243.3	2.0	1.0	.9	291.1	304.9	5.1	48.7	.0	51.
1.8	12.0	667.5	944.0	13.9	3.0	244.9	2.2	2.0	.9	291.0	306.1	5.3	50.5	.1	66
2.2	13.0	766.2	933.0	13.5	3.6	243.5	1.5	1.3	.7	292.4	306.7	5.3	51.2	.1	66.
2.4	14.0	856.9	923.0	13.1	3.2	233.7	.6	.5	.3	292.9	307.0	5.2	50.9	.1	64.
2.8	15.0	957.7	912.0	12.6	2.7	106.0	.5	-.4	.1	293.5	307.4	5.1	50.5	.1	64.
3.2	16.0	1050.3	902.0	12.3	3.4	114.5	.7	-.6	.3	294.0	308.7	5.4	54.4	.1	60.
3.6	17.0	1143.6	892.0	11.2	2.6	135.3	.6	-.4	.4	293.0	307.9	5.2	55.6	.1	51.
3.9	18.0	1247.1	881.0	10.6	2.2	65.0	.2	-.2	-.1	294.2	308.2	5.1	56.2	.1	46.
4.3	19.0	1342.3	871.0	10.6	3.1	49.7	1.1	-.8	-.7	295.2	310.2	5.5	59.7	.1	51.
4.7	20.0	1438.5	861.0	10.0	-.4	97.1	2.0	-1.9	.2	295.6	307.6	4.3	48.1	.1	51.
5.2	21.0	1546.0	850.0	12.9	-2.7	131.1	4.6	-3.4	3.0	299.7	310.2	3.7	33.7	.1	347.
5.5	22.0	1645.1	840.0	11.9	-6.0	135.7	6.1	-4.2	4 3	299.7	306.5	2.7	22.4	.2	330.
5.8	23.0	1735.1	831.0	11.2	-9.5	122.5	6.0	-5.0	3.7	295.0	306.4	2.2	22.5	.3	325.
6.2	24.0	1836.1	821.0	11.2	-9.2	114.7	8.2	-7.4	3.4	300.0	307.7	2.3	23.0	.5	314.
6.7	25.0	1930.2	811.0	10.0	-8.1	115.9	9.3	-8.4	4.1	301.5	309.0	2.6	25.7	.7	307.
7.1	26.0	2041.5	801.0	10.4	-8.2	119.0	9.6	-8.3	4.0	302.2	309.7	2.6	26.1	1.0	305.
7.5	27.0	2145.9	791.0	9.7	-8.2	122.9	9.5	-8.0	5.1	302.5	310.1	2.6	27.4	1.2	304.
7.8	28.0	2251.3	781.0	8.0	-8.5	123.7	9.6	-8.0	5.3	302.6	310.2	2.6	28.6	1.4	304.
8.2	29.0	2357.7	771.0	7.9	-8.6	124.9	9.6	-7.9	5.5	302.7	310.4	2.6	30.0	1.6	304.
8.6	30.0	2465.1	761.0	6.8	-8.4	126.2	9.6	-7 8	5.7	302.7	310.5	2.7	32.7	1.8	304.
9.0	31.0	2573.5	751.0	5.4	-9.3	127.5	10.0	-7.9	6.1	302.3	309.7	2.5	33.6	2.0	305.
9.4	32.0	2682.9	741.0	4.7	-9.4	126.9	11.0	-8.6	6.6	302.8	310.2	2.5	35.2	2.3	305.
9.8	33.0	2793.4	731.0	3.5	-9.8	126.6	11.4	-9 1	6.8	302.6	310.0	2.5	37.0	2.6	305.
10.2	34.0	2893.0	722.0	2.9	-10.4	126.9	11.4	-9.2	6.9	303.0	310.1	2.4	37.0	2.9	305.
10.6	35.0	2995.2	713.0	1.7	-11.9	128 1	11.3	-8.9	7.0	302.8	309.2	2.2	35 6	3.1	305.
10.9	36.0	3109.0	703.0	1.5	-13.2	129.9	10.9	8.3	7.0	303.0	309.7	2.0	32.4	3.3	306.
11.3	37.0	3212.6	694.0	.4	-14.4	134.3	9.0	-7.0	6.8	303.7	309.1	1.8	31.0	3.6	306.
11.7	38.0	3317.1	685.0	-.7	-14.0	140.0	8.9	-5.7	6.9	303.6	309.3	1.9	35.7	3.8	307.
12.2	39.0	3434.4	675.0	-1.5	-16.7	150 2	8.6	-4.3	7.5	304.0	308.6	1.5	30.1	4.0	308
12.6	40.0	3541.3	666.0	-1.2	-18.0	157.5	8.4	-3.2	7.8	305.5	309.5	1.3	24.7	4.2	309.
12.9	41.0	3649.8	657.0	-1.4	-22.8	164 3	7.7	-2.1	7.4	306.5	309.4	.9	17.7	4.4	310.
13.3	42.0	3771.0	647.0	-2.2	-23.6	177.9	6 2	-.2	6.2	306.9	309.8	.9	17.4	4.5	311.
13.7	43.0	3878.5	639.0	-2.8	-25 0	190.7	5 2	1.0	5 1	307.3	309.9	.8	16.1	4.6	313.
14.2	44.0	3982.7	630.0	-3.5	-25 3	198.0	4.6	8	4.6	307.7	310.2	.8	16.5	4.6	314.
14.6	45 0	4096.1	621.0	-4.0	-26.4	178.4	4.4	-.1	4.4	307.6	309.9	.7	16.4	4.7	316
15.0	46.0	4210.0	612.0	-5.5	-27.0	166.2	4.2	-1.0	4.1	308.0	310.2	.7	16.4	4.8	316.
15.4	47 0	4326.8	603.0	-6.4	-27.8	163.6	4.1	-1.2	3.9	30 2	310.3	.6	16.4	4 9	317.
15.8	48.0	4444 3	594.0	-6.6	-28.0	166.5	4.1	-.9	4.0	30 4	311.5	.6	16.2	5.0	317.
16.3	49.0	4563.3	585.0	-7.3	-28 5	177 2	4 0	-.2	4.0	309.9	311.9	.6	16.4	5.1	318
16.7	50.0	4684.0	576 0	-7.8	-26.7	187.0	3 9	.5	3 8	310.7	312.0	.6	16.7	5.1	319.

* BY SPEED MEANS ELEVATION ANGLE BETWEEN 6 AND 10 DEG
* BY TEMP MEANS TEMPERATURE OR TIME HAVE BEEN INTERPOLATED
** BY SPEED MEANS ELEVATION ANGLE LESS THAN 6 DEG

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1535 GMT

150 13. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
17.2	51.0	4792.7	560.0	-8.1	-28.9	198.0	3.4	1.1	3.3	311.6	313.7	.6	16.7	5.2	320.
17.6	52.0	4916.6	559.0	-9.1	-28.5	203.9	3.0	1.2	2.7	31 .	314.0	.6	18.8	5.2	321.
18.0	53.0	5027.9	551.0	-10.0	-29.2	202.9	2.6	1.0	2.4	312 .	314.2	.6	18.9	5.3	321.
18.4	54.0	5154.7	542.0	-10.7	-29.8	196.3	2.5	.7	2.4	312.7	314.7	.6	18.9	5.3	322.
18.8	55.0	5268.9	534.0	-11.7	-30.4	190.3	2.4	.7	2.3	312.9	314.8	.6	19.2	5.3	322.
19.2	56.0	5398.8	525.0	-12.8	-31.4	208.1	2.2	1.0	1.9	313.0	314.8	.5	19.3	5.4	323.
19.7	57.0	5515.7	517.0	-13.9	-32.3	219.4	2.2	1.4	1.7	313.1	314.7	.5	19.3	5.4	323.
20.2	58.0	5633.9	509.0	-15.0	-33.2	210.8	2.3	1.2	2.0	313.1	314.6	.5	19.4	5.4	324.
20.6	59.0	5753.4	501.0	-16.3	-34.2	197.8	2.5	.8	2.3	313.0	314.4	.4	19.4	5.4	325.
21.0	60.0	5874.4	493.0	-17.0	-34.8	190.2	2.6	.5	2.5	313.6	315.0	.4	19.4	5.5	325.
21.4	61.0	5997.0	485.0	-17.8	-35.6	191.9	2.3	.5	2.3	314.1	315.4	.4	19.2	5.5	326.
21.8	62.0	6121.2	477.0	-18.7	-36.3	200.1	1.9	.6	1.8	314.4	315.6	.4	19.5	5.5	326.
22.3	63.0	6262.8	468.0	-20.1	-36.9	213.6	1.4	.8	1.2	314.5	315.6	.3	20.6	5.6	326.
22.8	64.0	6374.3	461.0	-21.2	-37.0	210.6	1.4	.7	1.2	314.5	315.7	.3	22.4	5.6	327.
23.2	65.0	6503.3	453.0	-22.4	-36.9	205.4	1.6	.7	1.5	314.5	315.8	.3	25.0	5.6	327.
23.6	66.0	6617.4	446.0	-23.7	-37.2	206.8	1.9	.9	1.7	314.3	315.5	.3	27.3	5.6	327.
24.0	67.0	6749.4	438.0	-24.9	-35.8	213.4	2.0	1.1	1.7	314.4	315.8	.4	35.1	5.6	328.
24.4	68.0	6883.1	430.0	-26.2	-37.1	227.3	1.8	1.3	1.2	314.4	315.6	.4	34.7	5.7	328.
24.8	69.0	7001.5	423.0	-27.7	-38.3	245.4	1.6	1.4	.6	314.8	315.1	.3	35.3	5.7	329.
25.3	70.0	7121.2	416.0	-29.0	-39.2	261.0	1.7	1.6	.3	313.8	314.9	.3	36.1	5.6	329.
25.7	71.0	7259.7	408.0	-30.3	-40.3	265.5	1.9	1.9	.1	313.9	314.8	.3	36.5	5.6	330.
26.2	72.0	7382.7	401.0	-30.8	-40.8	260.5	2.3	2.3	.1	314.7	315.7	.3	36.4	5.6	330.
26.7	73.0	7925.5	393.0	-31.9	-41.8	265.7	2.5	2.5	.2	315.2	316.0	.2	36.4	5.6	331.
27.2	74.0	7634.1	387.0	-32.7	-42.4	250.6	2.5	2.4	.8	315.5	316.3	.2	36.7	5.5	331.
27.6	75.0	7762.4	380.0	-33.7	-43.4	234.9	2.6	2.1	1.5	315.8	316.5	.2	36.7	5.5	332.
28.1	76.0	7911.5	372.0	-34.8	-43.7	225.3	2.7	1.9	1.9	317.3	318.1	.2	36.2	5.6	333.
28.5	77.0	8044.3	365.0	-35.3	-44.9	227.8	2.6	1.9	1.7	317.3	318.0	.2	36.3	5.6	334.
28.9	78.0	8159.4	359.0	-36.9	-46.3	237.4	2.6	2.2	1.4	316.7	317.3	.2	36.6	5.6	334.
29.3	79.0	8295.2	352.0	-38.3	-47.7	249.7	3.0	2.8	1.0	316.6	317.2	.1	36.1	5.6	335.
29.8	80.0	8433.1	345.0	-39.6	-48.9	262.2	3.5	3.4	.5	316.6	317.1	.1	36.1	5.6	336.
30.3	81.0	8573.8	338.0	-40.7	99.9	269.2	3.6	3.6	.0	317.0	999.9	99.9	999.9	5.5	337.
30.8	82.0	8694.6	332.0	-41.8	99.9	271.9	3.2	3.2	-.1	317.1	999.9	99.9	999.9	5.5	338.
31.3	83.0	8817.8	326.0	-43.2	99.9	277.4	2.7	2.7	-.4	316.9	999.9	99.9	999.9	5.5	339.
31.6	84.0	8964.8	319.0	-43.5	99.9	283.8	2.6	2.5	-.6	318.5	999.9	99.9	999.9	5.4	339.
32.2	85.0	9091.3	313.0	-45.0	99.9	285.8	2.3	2.2	-.6	318.0	999.9	99.9	999.9	5.4	340.
32.6	86.0	9220.3	307.0	-46.3	99.9	277.7	2.3	2.3	-.3	318.0	999.9	99.9	999.9	5.3	340.
33.1	87.0	9373.3	300.0	-47.8	99.9	277.4	3.0	2.9	-.4	319.1	999.9	99.9	999.9	5.3	341.
33.6	88.0	9507.0	294.0	-47.5	99.9	281.6	3.8	3.7	-.8	320.3	999.9	99.9	999.9	5.3	342.
34.1	89.0	9643.0	288.0	-48.3	99.9	284.8	4.4	4.3	-1.1	321.0	999.9	99.9	999.9	5.2	343.
34.6	90.0	9781.1	282.0	-50.3	99.9	289.4	5.3	5.0	-1.8	320.1	999.9	99.9	999.9	5.1	345.
35.1	91.0	9921.2	276.0	-51.0	99.9	295.0	6.7	6.1	-2.8	321.0	999.9	99.9	999.9	5.0	346.
35.6	92.0	10063.9	270.0	-52.1	99.9	294.5	7.8	7.1	-3.2	321.5	999.9	99.9	999.9	4.9	348.
36.0	93.0	10184.6	265.0	-53.2	99.9	288.7	8.2	7.8	-2.6	321.6	999.9	99.9	999.9	4.8	350.
36.5	94.0	10332.0	259.0	-53.8	99.9	280.1	9.0	8.9	-1.6	322.8	999.9	99.9	999.9	4.7	353.
37.0	95.0	10482.0	253.0	-55.4	99.9	277.8	9.5	9.4	-1.3	322.6	999.9	99.9	999.9	4.6	356.

* BY SPEED MEANS ELEVATION ANGLE BETWEEN 6 AND 10 DEG
* BY TEMP MEANS TEMPERATURE OR TIME HAVE BEEN INTERPOLATED
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STATION NO 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1535 GMT

156 13 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
37.4	96 0	10689 2	248 0	-55 7	99.9	286.2	9 7	9 5	-1 7	323.9	999.9	99 9	999.9	4.6	359.
37 9	97 0	10764.9	242.0	-56 6	99 9	264 2	10 4	10 1	-2.5	325 0	999.9	99 9	999.9	4.5	3
38.3	98 0	10897.0	237 0	-57 7	99 9	267 5	11 3	10 8	-3.4	325.2	999.9	99.9	999 9	4.5	6
38.8	99 0	11031.3	232.0	-58.4	99 9	290 7	12 2	11 4	-4 3	326.1	999.9	99 9	999.9	4 4	11.
39.3	100 0	11195.7	226 0	-59.5	99 9	292 7	12 1	11 1	-4 7	327.0	999.9	99 9	999.9	4.3	15.
39 8	101 0	11335.8	221 0	-59 5	99 9	292.5	11 3	10 5	-4 3	329 1	999.9	99.9	999.9	4.3	26.
40.3	102.0	11478.9	216.0	-59.8	99 9	288.3	10 6	10 1	-3 3	330.7	999.9	99 9	999.9	4.3	24
40 8	103 0	11625 3	211 0	-59.8	99 9	281 9	10 5	10.2	-2 2	332.9	999.9	99 9	999.9	4 4	28
41.2	104 0	11775.1	206 0	-59.8	99 9	278 5	10 6	10 5	-1 6	335.2	999 9	99.9	999.9	4.5	32.
41.7	105 0	11920.3	201 0	-60.9	99 9	276.5	10 9	10 8	-1 2	335.9	999.9	99.9	999.9	4.6	35.
42.2	106 0	12064 8	196 0	-61.2	99 9	273 5	11 6	10 9	- 7	337.0	999 9	99 9	999.3	4 6	39
42.7	107 0	12245.4	191.0	-60.9	99 9	267.5	11 0	11.0	5	340.8	999 9	99 9	999.9	5.0	42
43.2	108 0	12410.5	186 0	-60.3	99.9	260 3	11 3	11 1	1 9	344.3	999.9	99.9	999.9	5.2	44.
43.7	109.0	12546.4	182.0	-59.3	99.9	255.1	11 7	11.3	3.0	348.2	999.9	99.9	999.9	5.5	46.
44 2	110.0	12721.4	177.0	-58.1	99 9	252.8	12 3	11.7	3 6	352.9	999.9	99.9	999.9	5.8	46
44.7	111 0	12865.3	173 0	-58 2	99 9	251.5	13.0	12.4	4 1	355 0	999.9	99.9	999.9	6.2	49.
45.2	112 0	13050.0	168.0	-58.1	99 9	250 1	13 6	12 8	4 6	358 2	999.9	99.9	999.9	6.6	50
45.8	113 0	13201.0	164.0	-58.2	99 9	248 7	13.7	12 8	5.0	346.4	999.9	99.9	999.9	7.0	52.
46.3	114 0	13357.2	160 0	-58 2	99 9	247 1	13 4	12.4	5 2	343.0	999.9	99.9	999.9	7.4	53.
46.8	115 0	13557.5	155.0	-57.4	99 9	245.1	12 9	11 7	5.4	347.7	999.9	99 9	999.9	7 6	53.
47.3	116.0	13722.4	151.0	-58.1	99 9	243.4	12.6	11.2	5.6	349.3	999.9	99.9	999.9	8.2	54.
47.9	117.0	13891.4	147.0	-58.4	99 9	242.5	13 3	11.8	6 1	371.6	999.9	99.9	999.9	8.6	54.
48.5	118.0	14064 7	143.0	-59.1	99.9	243.6	14.9	13.3	6.6	373.3	999.9	99.9	999.9	9.1	55.
49 1	119 0	14242.6	139.0	-59.1	99 9	245 8	16 0	14 6	6 5	376.4	999.9	99.9	999.9	9.7	55.
49.7	120.0	14425.4	135 0	-59.6	99.9	245.7	15.6	14.2	6.4	378.6	999.9	99.9	999.9	10.3	56.
50.3	121.0	14613.7	131.0	-59.3	99 9	241.7	15.0	13.2	7 1	382.5	999.9	99.9	999.9	10.6	56.
50.8	122.0	14758.8	128 0	-59.3	99.9	238.5	16 1	13 7	8.4	385.0	999.9	99.9	999.9	11.2	56.
51.4	123.0	14958.1	124.0	-58.4	99 9	239.3	17 9	15 4	9.2	390.1	999.9	99.9	999.9	11.9	57.
52.0	124.0	15164.4	120.0	-58.4	99.9	244.7	17 5	15.0	7.4	393.6	999.9	99.9	999.9	12.5	57.
52.6	125.0	15323 7	117.0	-56.1	99 9	250.5	16.6	15 1	5.7	397.3	999.9	99.9	999.9	13.1	57.
53.2	126 0	15542.9	113.0	-58.1	99 9	249.9	14.8	13.9	5 1	401 3	999.9	99.9	999.9	13.6	58
53.8	127.0	15712.4	110 0	-58.1	99.9	244 6	13 7	12 3	5.8	404.4	999.9	99.9	999.9	14.1	58.
54.4	128 0	15886.7	107.0	-57.9	99.9	240.9	12.7	11.1	6.2	407.9	999.9	99.9	999.9	14.6	58.
55.0	129.0	16127.1	103 0	-57.6	99.9	235.9	10.7	8.9	6 0	413.0	999.9	99.9	999.9	15.1	58.
55.6	130.0	16313.0	100.0	-55.3	99.9	222.7	9.6	6.5	7.1	413.2	999.9	99.9	999.9	15.4	58.
56.2	131.0	16503.6	97.0	-59.0	99.9	215.1	10.8	6.2	8.8	415.8	999.9	99.9	999.9	15.7	58
56.8	132.0	16699.4	94.0	-60.9	99.9	214.7	11.8	6.7	9.7	417.5	999.9	99.9	999.9	16.1	57.
57.5	133.0	16901.1	91.0	-60 9	99.9	215.2	12.5	7.2	10.2	421.4	999.9	99.9	999.9	16.6	56.
58.2	134.0	17109.6	88 0	-60.9	99 9	216 8	14.3	8.6	11.5	425.4	999.9	99.9	999.9	17.1	56.
58.8	135.0	17325.3	85.0	-60.9	99.9	221.5	15.2	10.0	11.4	429.7	999.9	99.9	999.9	17.6	55.
59.6	136.0	17549.0	82.0	-60.3	99.9	227.5	13.9	10.3	9.4	435.2	999.9	99.9	999.9	18.3	55.
60.2	137.0	17782.8	79.0	-59.1	99.9	230.3	13 3	10.3	8.5	442.4	999.9	99.9	999.9	18.8	55.
60.9	138 0	18025.5	76 0	-57.7	99.9	226.0	13.5	11.3	7.4	450.2	999.9	99.9	999.9	19.4	55.
61.7	139.0	18279.4	73.0	-56.1	99.9	244.1	12.3	11.1	5.4	454.7	999.9	99.9	999.9	20.0	55.
62.4	140.0	18454.6	71.0	-57.6	99 9	249 2	10 0	9.4	3.6	459.4	999.9	99.9	999.9	20.5	55.

* BY SPEED MEANS ELEVATION ANGLE BETWEEN 6 AND 16 DEG
* BY TEMP MEANS TEMPERATURE OF TIME HAVE BEEN INTERPOLATED
** BY SPEED MEANS ELEVATION ANGLE LESS THAN 6 DEG

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1535 GMT

156 13. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
63.2	141.0	19727.7	60.0	-56.9	99.9	238.8	8.0	6.8	4.1	466.5	999.9	99.9	999.9	20.9	55.
63.9	142.0	19914.2	65.0	-55.9	99.9	216.2	5.2	3.1	4.2	474.8	999.9	99.9	999.9	21.2	55.
64.6	143.0	19213.0	63.0	-55.9	99.9	199.8	4.3	1.5	4.1	479.0	999.9	99.9	999.9	21.3	55.
65.4	144.0	19522.9	60.0	-56.7	99.9	199.4	5.1	1.7	4.9	483.9	999.9	99.9	999.9	21.5	55.
66.3	145.0	19737.9	58.0	-56.6	99.9	217.8	5.9	3.6	4.7	489.0	999.9	99.9	999.9	21.8	54.
67.1	146.0	20075.0	55.0	-56.4	99.9	224.4	6.3	4.4	4.5	496.9	999.9	99.9	999.9	22.1	54.
67.9	147.0	20318.1	53.0	-56.6	99.9	228.7	6.8	5.1	4.5	501.8	999.9	99.9	999.9	22.3	54.
68.7	148.0	20679.0	50.0	-57.4	99.9	244.7	5.5	5.0	2.4	508.2	999.9	99.9	999.9	22.7	54
69.7	149.0	20937.4	48.0	-56.7	99.9	261.6	2.3	2.3	.3	515.0	999.9	99.9	999.9	22.9	54.
70.6	150.0	21344.5	45.0	-56.7	99.9	94.1	2.4	-2.4	.2	525.4	999.9	99.9	999.9	22.9	54.
71.5	151.0	21635.0	43.0	-56.4	99.9	122.3	7.1	-2.6	1.7	533.1	999.9	99.9	999.9	22.7	54.
72.5	152.0	22094.5	40.0	-56.1	99.9	278.6	1.3	1.3	-.2	545.1	999.9	99.9	999.9	22.9	54.
73.6	153.0	22420.9	38.0	-55.7	99.9	17.2	6.8	-2.0	-6.5	553.9	999.9	99.9	999.9	22.7	54.
74.6	154.0	22766.7	36.0	-53.8	99.9	42.3	5.6	-3.7	-4.1	567.6	999.9	99.9	999.9	22.3	55.
75.6	155.0	23326.6	33.0	-53.2	99.9	53.1	5.7	-4.6	-3.4	583.5	999.9	99.9	999.9	22.8	55.
76.9	156.0	23720.1	31.0	-54.6	99.9	49.5	9.2	-7.0	-6.0	596.2	999.9	99.9	999.9	21.4	55.
78.3	157.0	24381.5	28.0	-53.3	99.9	54.4	10.7	-8.7	-6.2	611.2	999.9	99.9	999.9	20.6	56.
79.8	158.0	24861.7	26.0	-50.6	99.9	45.7	12.4	-8.9	-8.7	632.1	999.9	99.9	999.9	19.5	55.
81.1	159.0	25383.2	24.0	-50.9	99.9	24.5	13.2	-5.5	-12.0	645.9	999.9	99.9	999.9	18.6	56.
82.8	160.0	26257.0	21.0	-48.2	99.9	39.8	9.4	-6.0	-7.2	679.2	999.9	99.9	999.9	17.6	58.
84.8	161.0	27274.6	18.0	-47.8	99.9	28.7	11.2	-4.8	-10.5	711.1	999.9	99.9	999.9	16.5	60.
87.3	162.0	28062.5	16.0	-41.8	99.9	21.9	9.6	-3.6	-8.9	784.9	999.9	99.9	999.9	15.2	62
89.7	163.0	29471.3	13.0	-41.3	99.9	999.9	99.9	99.9	99.9	883.0	999.9	99.9	999.9	999.9	999.

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1541 GMT

145 13 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
0.0	19 1	1366.0	867.4	9.0	3 8	60.0	4 1	-3.6	-2.1	293.9	309.6	5.6	70.0	0.0	0
.3	20.0	1476 6	856 0	13 5	2.6	95.4	4.5	-4.5	.4	299.7	314.7	5.4	47.0	.1	283.
.7	21.0	1585.4	845.0	13 3	-6 0	91.0	5.2	-5.2	.1	300.6	307.8	2.5	21.9	.2	281.
1.0	22.0	1685.3	835.0	12 7	-8.8	86 4	6.3	-6 3	-.4	301.0	307.9	2.4	21.4	.2	279.
1.3	23.0	1786.3	825.0	12 3	-9.4	90 4	7 6	-7 6	.1	301.6	308.3	2 3	20.9	.4	272.
1.7	24 0	1896.6	814 0	11.9	-8.8	100 1	8.5	-8 3	1.5	302 4	309.5	2.4	22.4	.6	272.
2.1	25 0	2001.9	804.0	11.4	-8.3	112.8	8.6	-7.9	3.3	302.6	310.3	2.5	24.3	.8	276.
2.4	26.0	2106.0	794.0	9.5	-9.2	117.5	8.3	-7.3	3.8	301.9	309.0	2.4	25.7	.9	280.
2.8	27.0	2211.0	784.0	9.3	-7 8	117.4	8.4	-7 5	3 9	302.8	310.6	2.7	26 9	1.1	283.
3.2	28.0	2317.3	774.0	8.4	-7 8	116.2	9.3	-8.4	4 1	303.0	311.0	2.7	30.7	1.3	285.
3.5	29.0	2424 5	764 0	7.3	-7 8	116.0	10 5	-9.4	4.6	302.9	311.1	2.8	33.1	1.5	286.
3.8	30.0	2532.7	754.0	6.4	-7.6	114.3	10.7	-9.7	4.4	303.1	311.5	2.9	35.7	1.7	288.
4.2	31 0	2642.0	744.0	4.9	-8 2	111 7	10.9	-10.1	4.0	302.6	310.7	2.8	38.2	2.0	288.
4.6	32.0	2752.2	734.0	4.2	-7 8	109.6	11.3	-10 6	3.8	303.0	311.5	2.9	41.1	2.2	289.
4.9	33.0	2863.6	724.0	2.9	-8 2	110.2	11.6	-11.0	4.1	302.7	311.1	2.9	44.0	2.4	288.
5.3	34 0	2976.0	714.0	1.9	-8.5	114.2	11.6	-10.6	4.8	302.8	311.1	2.8	46.0	2.7	289.
5.7	35.0	3078.2	705.0	.9	-8.7	116 1	11.5	-10.3	5.1	302.9	311.1	2.8	48.7	3.0	289.
6.1	36.0	3192.9	695.0	-.1	-8 9	116.2	11.5	-10.3	5.1	303.0	311.3	2.8	51.5	3.3	290.
6.4	37.0	3297.0	686 0	-1 7	-9.5	120.0	11.2	-9.7	5.6	302.4	310.3	2.7	54.0	3.5	290.
6.8	38.0	3413.9	676.0	-1.7	-22 1	130.3	10.4	-7.9	6.7	303.7	306.7	1.0	19.2	3.7	291.
7.3	39 0	3520.5	667 0	-1.8	-24 1	141.1	9.5	-6.0	7.4	304.6	307.2	.8	16.3	4.0	293.
7.6	40 0	3640.6	657.0	-2.2	-24.5	145.9	9.2	-5.2	7.6	305.6	308.2	.8	16.1	4.1	294.
8.0	41.0	3750.1	648.0	-2.2	-24.5	152.7	9.5	-4.3	8.4	306.8	309.4	.8	16.1	4.3	296.
8.4	42.0	3861.0	639.0	-3.2	-25.7	154.9	10.0	-4.2	9.0	306.8	309.2	.7	15.6	4.5	298.
8.8	43.0	3973.1	630.0	-3.7	-25.7	154.4	10.4	-4.5	9.4	307.5	309.9	.7	16.1	4.7	300.
9.2	44 0	4099.1	620 0	-4.9	-26.4	153 6	10.5	-4.7	9.4	307.5	309.8	.7	16.6	4.9	301.
9.6	45.0	4213.8	611.0	-6.0	-27.1	154.0	10.1	-4.4	9.1	307.6	309.8	.7	16.8	5.1	303.
10.0	46.0	4329.8	602.0	-7.0	-27.8	156.8	9.5	-3.7	8.7	307.7	309.8	.6	17.1	5.3	304.
10.4	47.0	4447.0	593.0	-7.9	-29.0	162.1	8.3	-2.5	7.9	308.0	309.9	.6	16.5	5.5	306.
10.8	48.0	4565.7	584.0	-8.6	-30.0	169 8	6.4	-1.1	6.3	308.5	310.3	.5	15.7	5.7	307.
11.2	49.0	4686.0	575.0	-8.9	-29.8	180.6	4.5	.0	4.5	309.5	311.4	.6	16.5	5.7	308.
11.7	50.0	4794.3	567.0	-10.0	-30 7	191.8	2.8	.6	2.8	309.6	311.3	.5	16.3	5.8	309.
12.2	51.0	4917.5	558.0	-10.8	-31.4	188.3	2.3	.3	2.3	310.0	311.6	.5	16.3	5.8	309.
12.6	52.0	5042.2	549.0	-12.0	-32.3	187.2	2.2	.3	2.2	310.1	311.6	.5	16.4	5.9	310.
13.0	53.0	5154.5	541.0	-12.2	-32.6	192.1	2.3	.5	2.2	311.0	312.6	.5	16.4	5.9	310.
13.4	54.0	5282.6	532.0	-12.9	-32.6	207.5	2.1	1.0	1.8	311.7	313.2	.5	17.3	5.9	311.
13.9	55.0	5397.9	524.0	-13.9	-33.3	221.1	2.1	1.4	1.6	311.9	313.3	.4	17.6	5.9	311.
14.3	56.0	5529.3	515.0	-14.6	-33.8	223.5	2.3	1.6	1.7	312.6	314.0	.4	17.6	5.9	312.
14.8	57.0	5647.5	507.0	-16.4	-34.8	224.2	2.5	1.7	1.8	312.3	313.6	.4	17.9	5.9	312.
15.2	58.0	5767.3	499.0	-16.4	-35.6	217.6	2.4	1.5	1.9	313.2	314.5	.4	17.2	5.9	313.
15.7	59.0	5888.5	491.0	-17.7	-37.0	198.2	2.3	.7	2.2	313.2	314.3	.3	16.5	5.9	314.
16.2	60.0	6011.4	483.0	-18.2	-36.9	180.1	2.2	.0	2.2	314.0	315.1	.3	17.5	6.0	314.
16.7	61.0	6135.9	475.0	-19.3	-36.2	166.6	2.1	-.5	2.1	314.1	315.4	.4	20.6	6.0	315
17.1	62.0	6261.9	467.0	-20.5	-33.8	160.7	1.7	-.6	1.6	314.1	315.7	.5	29.0	6.1	.6.
17.5	63.0	6389.6	459.0	-21.6	-34.1	174.7	.7	-.1	.7	314.4	315.9	.5	31.0	6.1	315.

* BY SPEED MEANS ELEVATION ANGLE BETWEEN 6 AND 10 DEG
* BY TEMP MEANS TEMPERATURE OR TIME HAVE BEEN INTERPOLATED
** BY SPEED MEANS ELEVATION ANGLE LESS THAN 6 DEG

STATION NO 4
TEHACHAPI, CALIF

14 APRIL 1981
1541 GMT

145 13. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T Dg K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
18.0	64.0	6501.6	452.0	-22.8	-35.1	129.4	.2	-.1	.1	314.2	315.7	.4	21.3	6.1	315.
18.4	65.0	6633.3	444.0	-23.7	-35.4	76.3	.7	-.7	-.2	314.7	316.1	.4	23.0	6.1	315.
18.8	66.0	6765.9	436.0	-25.0	-36.3	28.6	1.9	-.4	-1.8	314.6	316.0	.4	23.7	6.1	315.
19.3	67.0	6883.2	429.0	-26.3	-37.7	341.2	1.8	.6	-1.7	314.4	315.6	.3	23.0	6.1	314.
19.8	68.0	7015.1	421.0	-27.1	-38.7	318.0	2.3	1.5	-1.7	315.1	316.2	.3	22.2	6.0	314.
20.3	69.0	7139.7	414.0	-28.3	-39.6	300.2	2.4	2.1	-1.2	315.1	316.1	.3	22.0	5.9	314.
20.7	70.0	7261.7	407.0	-29.5	-40.6	289.2	2.4	2.2	-.8	315.1	316.0	.3	23.0	5.9	315.
21.2	71.0	7385.4	400.0	-30.3	-41.2	277.4	1.9	1.9	-.2	315.6	316.5	.3	23.4	5.8	315.
21.6	72.0	7510.0	393.0	-31.1	-41.9	261.9	1.4	1.3	.2	316.2	317.1	.2	23.4	5.8	315.
22.0	73.0	7637.8	386.0	-32.5	-42.1	233.1	.9	.8	.6	315.9	316.7	.2	23.5	5.8	315.
22.4	74.0	7766.6	379.0	-33.6	-44.1	230.6	.9	.7	.6	316.2	316.9	.2	23.6	5.8	316.
22.9	75.0	7897.1	372.0	-34.8	-45.1	225.4	.9	.6	.6	316.3	316.9	.2	23.9	5.8	316.
23.4	76.0	8029.3	365.0	-36.1	-46.2	210.9	.9	.5	.8	316.2	316.8	.2	24.2	5.8	316.
23.9	77.0	8163.5	358.0	-37.3	-47.1	213.8	1.0	.5	.8	316.4	316.9	.1	24.8	5.8	316.
24.4	78.0	8299.6	351.0	-39.4	-48.8	237.7	1.1	.9	.6	316.7	317.2	.1	25.1	5.8	317.
24.9	79.0	8417.8	345.0	-39.8	-49.2	260.6	1.4	1.4	.2	316.4	316.9	.1	25.3	5.8	317.
25.4	80.0	8557.7	338.0	-44.7	99.9	280.1	2.0	1.9	-.3	317.0	999.9	99.9	999.9	5.7	317.
25.9	81.0	8679.3	332.0	-41.8	99.9	293.3	2.1	2.0	-.8	317.1	999.9	99.9	999.9	5.7	318.
26.4	82.0	8823.3	325.0	-43.1	99.9	304.4	2.1	1.7	-1.2	317.3	999.9	99.9	999.9	5.6	318.
26.9	83.0	8948.6	319.0	-44.3	99.9	312.1	2.3	1.7	-1.5	317.3	999.9	99.9	999.9	5.6	318.
27.4	84.0	9075.6	313.0	-45.2	99.9	314.1	2.3	1.6	-1.6	317.8	999.9	99.9	999.9	5.5	318.
27.9	85.0	9226.3	306.0	-46.4	99.9	314.7	2.3	1.6	-1.6	318.1	999.9	99.9	999.9	5.4	318.
28.4	86.0	9357.5	300.0	-47.5	99.9	314.3	2.5	1.8	-1.8	318.5	999.9	99.9	999.9	5.4	318.
28.9	87.0	9490.7	294.0	-48.5	99.9	312.8	2.8	2.0	-1.9	318.9	999.9	99.9	999.9	5.3	318.
29.3	88.0	9649.0	287.0	-49.4	99.9	311.3	3.4	2.5	-2.2	319.8	999.9	99.9	999.9	5.2	318.
29.8	89.0	9764.0	282.0	-50.1	99.9	307.1	4.6	3.7	-2.8	320.3	999.9	99.9	999.9	5.1	319.
30.3	90.0	9928.8	275.0	-50.7	99.9	301.4	6.1	5.2	-3.2	321.8	999.9	99.9	999.9	4.9	319.
30.8	91.0	10047.3	270.0	-51.8	99.9	297.6	7.6	6.7	-3.5	321.9	999.9	99.9	999.9	4.7	320.
31.3	92.0	10192.7	264.0	-52.6	99.9	296.4	8.9	7.9	-3.9	322.9	999.9	99.9	999.9	4.5	321.
31.8	93.0	10316.0	259.0	-53.5	99.9	296.0	9.8	8.8	-4.3	323.3	999.9	99.9	999.9	4.3	323.
32.3	94.0	10466.2	253.0	-54.9	99.9	294.9	10.1	9.1	-4.2	323.3	999.9	99.9	999.9	4.0	325.
32.8	95.0	10593.7	248.0	-55.6	99.9	292.4	9.9	9.2	-3.8	324.2	999.9	99.9	999.9	3.7	327.
33.3	96.0	10749.5	242.0	-56.4	99.9	288.1	10.6	10.1	-3.3	325.2	999.9	99.9	999.9	3.5	330.
33.8	97.0	10881.8	237.0	-57.4	99.9	285.5	12.6	12.2	-3.4	326.7	999.9	99.9	999.9	3.3	334.
34.3	98.0	11043.4	231.0	-58.4	99.9	286.3	14.9	14.3	-4.2	326.5	999.9	99.9	999.9	3.0	340.
34.8	99.0	11153.2	227.0	-58.9	99.9	287.4	15.7	15.0	-4.7	327.4	999.9	99.9	999.9	2.7	348.
35.3	100.0	11321.3	221.0	-58.9	99.9	286.7	15.8	14.4	-4.3	329.9	999.9	99.9	999.9	2.5	357.
35.9	101.0	11464.0	216.0	-59.1	99.9	283.9	13.1	12.7	-3.1	331.8	999.9	99.9	999.9	2.4	9.
36.5	102.0	11611.5	211.0	-59.6	99.9	277.3	11.2	11.1	-1.4	333.2	999.9	99.9	999.9	2.4	19.
37.0	103.0	11761.6	206.0	-59.3	99.9	271.6	11.1	11.1	-.3	334.1	999.9	99.9	999.9	2.6	26.
37.5	104.0	11915.2	201.0	-60.2	99.9	272.0	12.2	12.2	-.4	335.6	999.9	99.9	999.9	2.7	32.
38.0	105.0	12068.4	197.0	-60.9	99.9	274.5	13.1	13.0	-1.0	337.0	999.9	99.9	999.9	2.9	39.
38.5	106.0	12208.3	192.0	-60.7	99.9	273.8	13.1	13.1	-.9	340.6	999.9	99.9	999.9	3.2	45.
39.1	107.0	12364.8	187.0	-60.6	99.9	266.6	12.9	12.9	.0	344.2	999.9	99.9	999.9	3.5	51.
39.6	108.0	12499.8	183.0	-60.8	99.9	258.9	13.2	12.9	2.7	346.5	999.9	99.9	959.9	3.8	54.

* BY SPEED MEANS ELEVATION ANGLE BETWEEN 6 AND 10 DEG
+ BY TEMP MEANS TEMPERATURE OR TIME HAVE BEEN INTERPOLATED
** BY SPEED MEANS ELEVATION ANGLE LESS THAN 6 DEG

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1541 GMT

145 13. 0

TIME MIN	CNTCT	HEIGHT GPH	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
40.2	109.0	12673.2	178.0	-58.9	99.9	253.0	14.1	13.6	3.9	351.0	999.9	99.9	999.9	4.3	56.
40.7	110.0	12816.3	174.0	-57.6	99.9	257.0	15.0	14.6	3.4	355.5	999.9	99.9	999.9	4.7	58.
41.2	111.0	13000.6	169.0	-57.2	99.9	259.6	15.4	15.1	2.8	359.0	999.9	99.9	999.9	5.2	59.
41.8	112.0	13151.9	165.0	-57.7	99.9	257.1	15.1	14.7	3.4	360.7	999.9	99.9	999.9	5.7	61.
42.4	113.0	13348.9	160.0	-58.1	99.9	253.2	14.4	13.8	4.2	363.3	999.9	99.9	999.9	6.2	63.
43.0	114.0	13505.4	156.0	-58.1	99.9	247.2	13.5	12.5	5.2	365.9	999.9	99.9	999.9	6.7	63.
43.5	115.0	13669.2	152.0	-57.7	99.9	239.7	12.5	11.7	6.8	369.2	999.9	99.9	999.9	7.1	63.
44.1	116.0	13837.4	148.0	-57.9	99.9	234.2	14.4	11.7	8.4	371.8	999.9	99.9	999.9	7.6	63.
44.7	117.0	14009.8	144.0	-58.0	99.9	234.2	15.6	12.6	9.1	373.2	999.9	99.9	999.9	8.1	62.
45.3	118.0	14141.9	141.0	-59.1	99.9	236.1	17.3	14.7	9.1	374.8	999.9	99.9	999.9	8.7	62.
45.8	119.0	14322.8	137.0	-58.8	99.9	241.8	18.5	16.3	8.7	376.8	999.9	99.9	999.9	9.2	62.
46.4	120.0	14508.6	133.0	-58.6	99.9	244.7	18.1	16.4	7.7	382.1	999.9	99.9	999.9	9.9	62.
47.0	121.0	14700.5	129.0	-58.8	99.9	244.6	16.7	15.1	7.2	386.1	999.9	99.9	999.9	10.6	62.
47.6	122.0	14898.3	125.0	-58.8	99.9	241.6	16.3	14.3	7.8	388.6	999.9	99.9	999.9	11.1	62.
48.2	123.0	15088.9	122.0	-58.6	99.9	239.9	18.0	15.6	9.0	391.6	999.9	99.9	999.9	11.7	62.
48.8	124.0	15268.6	118.0	-58.2	99.9	242.5	19.2	17.0	8.9	394.0	999.9	99.9	999.9	12.4	62.
49.4	125.0	15422.7	115.0	-58.2	99.9	247.0	18.3	16.9	7.2	398.9	999.9	99.9	999.9	13.1	62.
50.0	126.0	15645.7	111.0	-58.1	99.9	248.2	16.2	15.1	6.0	402.3	999.9	99.9	999.9	13.8	62.
50.6	127.0	15818.0	108.0	-58.0	99.9	243.9	14.9	13.4	6.5	406.2	999.9	99.9	999.9	14.2	62.
51.3	128.0	15994.8	105.0	-58.9	99.9	241.2	15.8	13.9	7.6	408.1	999.9	99.9	999.9	14.9	62.
51.9	129.0	16238.8	101.0	-58.9	99.9	246.8	14.6	12.7	7.3	412.7	999.9	99.9	999.9	15.5	62.
52.5	130.0	16427.2	98.0	-60.2	99.9	232.6	12.1	9.5	7.4	413.9	999.9	99.9	999.9	16.0	62.
53.2	131.0	16628.8	95.0	-61.0	99.9	228.4	12.9	8.4	9.8	415.8	999.9	99.9	999.9	16.5	62.
53.8	132.0	16828.1	92.0	-61.0	99.9	218.9	13.9	8.8	10.6	419.7	999.9	99.9	999.9	16.9	61.
54.4	133.0	17026.2	89.0	-60.9	99.9	218.8	14.6	9.1	11.3	424.8	999.9	99.9	999.9	17.4	60.
55.1	134.0	17229.4	86.0	-60.9	99.9	216.6	17.0	10.1	13.6	428.2	999.9	99.9	999.9	18.0	60.
55.8	135.0	17460.3	83.0	-60.7	99.9	226.1	18.8	12.1	14.4	433.8	999.9	99.9	999.9	18.7	59.
56.5	136.0	17698.4	80.0	-58.9	99.9	228.5	16.7	12.5	11.1	441.2	999.9	99.9	999.9	19.8	59.
57.2	137.0	17938.8	77.0	-58.4	99.9	232.8	12.9	10.3	7.8	447.1	999.9	99.9	999.9	20.1	59.
57.8	138.0	18096.3	75.0	-57.7	99.9	234.5	13.9	10.6	7.6	451.9	999.9	99.9	999.9	20.5	59.
58.5	139.0	18282.9	72.0	-59.3	99.9	240.7	16.6	14.5	8.1	453.9	999.9	99.9	999.9	21.1	59.
59.2	140.0	18712.6	68.0	-57.4	99.9	249.4	12.3	11.5	4.3	465.4	999.9	99.9	999.9	21.8	59.
59.8	141.0	18886.4	67.0	-56.7	99.9	242.7	6.6	5.9	3.0	468.9	999.9	99.9	999.9	22.1	59.
60.7	142.0	19097.3	64.0	-55.9	99.9	218.6	8.1	5.1	6.3	476.9	999.9	99.9	999.9	22.5	59.
61.5	143.0	19468.1	61.0	-56.9	99.9	206.9	8.4	3.8	7.5	481.3	999.9	99.9	999.9	22.8	59.
62.3	144.0	19721.8	58.0	-56.6	99.9	199.3	6.6	2.2	6.2	489.8	999.9	99.9	999.9	23.1	57.
63.2	145.0	19944.2	56.0	-57.1	99.9	192.7	5.9	1.4	5.8	492.8	999.9	99.9	999.9	23.3	57.
64.0	146.0	20174.5	54.0	-56.9	99.9	208.3	7.7	2.7	7.2	498.3	999.9	99.9	999.9	23.6	56.
64.9	147.0	20436.1	51.0	-57.4	99.9	214.8	7.8	4.8	6.8	508.4	999.9	99.9	999.9	24.0	56.
65.8	148.0	20709.2	49.0	-57.1	99.9	244.6	6.8	6.2	2.9	512.8	999.9	99.9	999.9	24.3	56.
66.7	149.0	21109.2	46.0	-56.9	99.9	283.4	3.7	3.6	1.1	521.7	999.9	99.9	999.9	24.6	56.
67.7	150.0	21471.1	44.0	-56.4	99.9	146.8	4.1	-2.2	3.4	529.6	999.9	99.9	999.9	24.7	56.
68.7	151.0	21917.7	41.0	-56.1	99.9	158.4	4.2	-1.7	3.8	536.2	999.9	99.9	999.9	24.7	55.
69.7	152.0	22233.5	39.0	-57.1	99.9	329.8	.5	.3	-.5	546.5	999.9	99.9	999.9	24.7	55.
70.7	153.0	22567.0	37.0	-55.7	99.9	6.7	6.8	-.7	-6.8	550.2	999.9	99.9	999.9	24.7	55.

* BY SPEED MEANS ELEVATION ANGLE BETWEEN 6 AND 10 DEG
* BY TEMP MEANS TEMPERATURE OR TIME HAVE BEEN INTERPOLATED
** BY SPEED MEANS ELEVATION ANGLE LESS THAN 6 DEG

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1541 GMT

148 13. 8

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
71.8	154.8	22984.8	35.8	-52.9	99.9	46.6	6.8	-4.9	-4.6	574.6	999.9	99.9	999.9	24.2	96.
73.1	155.8	23499.9	32.8	-54.6	99.9	54.5	7.7	-6.3	-4.5	584.9	999.9	99.9	999.9	23.8	95.
74.4	156.8	23913.5	30.8	-54.1	99.9	37.8	10.1	-6.1	-8.1	597.1	999.9	99.9	999.9	23.8	96.
75.7	157.8	24898.4	27.8	-53.5	99.9	43.9	10.7	-7.5	-7.7	617.1	999.9	99.9	999.9	22.3	96.
77.2	158.8	25887.7	25.8	-51.6	99.9	50.1	12.8	-9.8	-7.7	636.2	999.9	99.9	999.9	21.3	97.
78.8	159.8	25638.2	23.8	-50.4	99.9	28.9	11.3	-5.5	-9.9	686.1	999.9	99.9	999.9	20.8	98.
80.8	160.8	26844.8	20.8	-49.1	99.9	31.4	11.5	-6.0	-9.9	686.8	999.9	99.9	999.9	19.9	99.
82.8	161.8	27615.7	17.8	-47.3	99.9	23.8	13.6	-5.5	-12.4	724.2	999.9	99.9	999.9	17.8	62.
85.1	162.8	28482.8	15.8	-42.8	99.9	39.1	8.2	-5.2	-6.4	766.8	999.9	99.9	999.9	16.8	68.
87.9	163.8	29418.5	13.8	-42.4	99.9	999.9	99.9	99.9	99.9	799.2	999.9	99.9	999.9	999.9	999.

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1815 GMT

160 12. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
0.0	6.0	168.0	1002.0	22.6	8.0	330.0	.5	.3	-.4	295.6	313.7	6.7	39.0	0.0	0.
.2	7.0	194.0	999.0	21.4	8.0	286.7	.5	.4	-.1	294.6	312.0	6.8	42.1	.0	70.
.7	8.0	281.0	989.0	20.3	7.4	283.3	.7	.6	-.2	294.4	312.0	6.6	43.5	.0	78.
1.0	9.0	368.5	979.v	19.2	6.6	280.9	.9	.9	-.2	294.1	311.0	6.3	44.0	.0	85.
1.3	10.0	465.4	968.0	17.9	5.7	267.5	1.0	.9	-.3	293.8	309.9	6.0	44.8	.1	91.
1.7	11.0	563.1	957.0	17.1	5.7	291.7	.7	.6	-.3	293.9	310.2	6.0	47.2	.1	97.
2.1	12.0	652.6	947.0	16.3	4.6	257.8	.2	.2	.0	294.0	309.2	5.6	46.0	.1	101.
2.5	13.0	751.0	936.0	15.4	4.2	198.2	.6	.2	.6	294.1	309.1	5.5	47.0	.1	96.
2.9	14.0	842.9	926.0	15.0	4.0	169.6	.3	-.1	.3	294.6	310.5	5.9	50.4	.1	84.
3.2	15.0	934.8	916.0	14.6	4.5	92.7	.2	-.2	.0	295.1	310.0	5.8	50.5	.1	82.
3.6	16.0	1027.6	906.0	14.3	4.2	122.1	.2	-.2	.1	295.6	311.2	5.7	50.7	.1	87.
4.0	17.0	1121.3	896.0	13.9	3.9	194.9	2.2	.6	2.1	296.2	311.6	5.7	50.9	.1	95.
4.3	18.0	1215.9	886.0	13.5	3.6	167.4	3.4	-.7	3.3	296.7	312.1	5.6	51.2	.1	52.
4.6	19.0	1321.2	875.0	13.9	3.8	151.3	4.9	-2.4	4.3	298.2	314.0	5.8	50.5	.2	29.
5.0	20.0	1418.5	865.0	15.9	2.5	132.8	7.2	-5.3	4.9	301.3	316.2	5.3	48.7	.2	355.
5.3	21.0	1517.1	855.0	15.6	-6.7	134.5	9.0	-5.7	5.6	302.0	318.0	2.7	20.0	.4	348.
5.7	22.0	1606.7	846.0	14.8	-7.3	134.9	9.3	-5.9	5.9	302.1	309.8	2.6	20.0	.6	331.
6.1	23.0	1707.0	836.0	13.9	-7.5	133.4	7.8	-5.7	5.0	302.1	309.7	2.6	21.9	.8	327.
6.5	24.0	1808.2	826.0	13.1	-7.6	131.3	7.3	-5.5	4.8	302.3	310.0	2.6	22.9	.9	324.
6.9	25.0	1910.3	816.0	12.3	-7.7	129.0	7.8	-6.1	4.9	302.6	310.3	2.6	23.9	1.1	322.
7.3	26.0	2013.5	806.0	11.9	-7.6	128.5	8.2	-6.4	5.1	303.2	311.1	2.7	24.8	1.3	320.
7.7	27.0	2117.7	796.0	10.4	-8.4	127.7	8.4	-6.7	5.2	302.7	310.2	2.6	25.7	1.5	318.
8.2	28.0	2222.7	786.0	9.5	-8.4	125.9	8.5	-6.9	5.0	302.8	310.4	2.6	27.4	1.7	317.
8.6	29.0	2328.7	776.0	8.6	-8.3	125.4	8.7	-7.1	5.0	303.1	310.9	2.6	28.9	1.9	315.
9.0	30.0	2425.0	767.0	7.5	-9.0	126.5	8.7	-7.0	5.2	302.8	310.2	2.5	29.7	2.2	315.
9.5	31.0	2533.0	757.0	7.3	-8.3	126.5	9.1	-7.3	5.4	303.7	311.7	2.7	31.0	2.4	314.
9.9	32.0	2642.1	747.0	5.9	-9.6	127.3	9.3	-7.4	5.6	303.4	310.7	2.5	31.0	2.6	313.
10.3	33.0	2741.2	738.0	4.7	-10.0	128.5	9.0	-7.0	5.6	303.1	309.9	2.3	31.5	2.9	313.
10.8	34.0	2852.2	728.0	3.9	-11.5	132.4	8.4	-6.2	5.7	303.4	309.9	2.2	31.5	3.1	312.
11.3	35.0	2953.1	719.0	3.8	-12.9	140.0	8.7	-5.6	6.7	303.5	309.4	2.0	29.7	3.4	313.
11.7	36.0	3055.1	710.0	3.0	-14.4	146.9	9.6	-5.2	8.0	304.6	309.9	1.8	26.3	3.6	313.
12.1	37.0	3169.8	700.0	2.2	-14.6	153.3	10.3	-4.6	9.2	304.9	310.3	1.8	27.5	3.8	314.
12.5	38.0	3274.1	691.0	1.4	-16.0	160.6	9.9	-3.3	9.3	305.1	310.0	1.6	25.9	4.1	316.
13.0	39.0	3379.5	682.0	.7	-18.8	167.3	8.4	-1.8	8.2	305.6	309.5	1.3	21.4	4.3	317.
13.4	40.0	3486.1	673.0	.6	-21.7	166.6	7.4	-1.7	7.2	306.5	309.7	1.0	16.9	4.5	319.
13.8	41.0	3586.1	663.0	-.1	-22.8	165.1	6.2	-1.6	6.0	307.1	310.1	.9	16.0	4.6	320.
14.3	42.0	3703.0	655.0	-1.2	-23.7	162.5	5.1	-1.5	4.8	306.9	309.7	.9	16.1	4.7	320.
14.8	43.0	3813.1	646.0	-2.2	-24.6	159.9	4.6	-1.6	4.3	307.1	309.7	.8	15.9	4.9	321.
15.2	44.0	3924.3	637.0	-3.1	-25.3	156.9	4.3	-1.7	3.9	307.3	309.7	.8	15.9	5.0	321.
15.7	45.0	4036.8	628.0	-4.0	-26.2	149.3	4.3	-2.2	3.7	307.5	309.8	.7	15.8	5.1	322.
16.1	46.0	4150.5	619.0	-4.8	-26.8	147.4	4.7	-2.5	4.0	307.9	310.1	.7	15.8	5.2	322.
16.6	47.0	4265.6	610.0	-5.1	-27.1	150.1	5.4	-2.4	4.8	308.0	311.0	.7	15.8	5.4	322.
17.1	48.0	4382.2	601.0	-5.5	-27.4	161.5	6.0	-1.9	5.7	309.6	311.8	.7	15.8	5.5	322.
17.5	49.0	4500.4	592.0	-6.1	-27.5	168.6	6.0	-1.2	5.8	310.2	312.4	.7	16.4	5.7	323.
17.9	50.0	4606.8	584.0	-6.7	-27.7	176.9	5.3	-.3	5.2	310.7	312.9	.7	16.9	5.8	324.

• BY SPEED MEANS ELEVATION ANGLE BETWEEN 6 AND 10 DEG
• BY TEMP MEANS TEMPERATURE OR TIME HAVE BEEN INTERPOLATED
•• BY SPEED MEANS ELEVATION ANGLE LESS THAN 6 DEG

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1615 GMT

160 12. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
18.3	51 0	4727.0	575.0	-7.6	-20.1	186.9	4.6	.6	4.5	311.1	313.2	.6	17.4	5.9	324.
18.8	52.0	4826.8	567.0	-7.9	-20.2	199.7	4 2	1.4	4.0	312.0	314.1	.7	17.6	6.0	325.
19.3	53.0	4960.9	558.0	-8.0	-20.9	206.6	4.5	2.0	4.1	312.4	314.4	.6	17.7	6.0	326.
19.7	54.0	5072.7	550.0	-9.4	-29.4	208.0	4.9	2.3	4.3	313.0	315.0	.6	17.7	6.1	327.
20.2	55 0	5185.7	542.0	-10.4	-30.2	208.4	5.0	2.4	4.4	313.1	315.0	.6	17.7	6.1	329.
20.7	56.0	5314.3	533.0	-11.7	-30.6	205.2	4.8	2.0	4.3	313.0	314.9	.6	18.9	6.2	330.
21.2	57.0	5429.9	525 0	-12.8	-31.2	203.3	4.3	1.7	4.0	313.0	314.8	.5	19.6	6.3	331.
21.7	58 0	5546.8	517.0	-13.9	-32 1	204.1	4.0	1.6	3.6	313.1	314.7	.5	19.7	6.4	332.
22.1	59.0	5665.1	509.0	-14.8	-33.0	206.1	3.7	1.6	3.3	313.4	315.0	.5	19.4	6.4	332.
22.6	60.0	5784.0	501.0	-15.6	-33.7	204.4	3.4	1.4	3.1	313.9	315.4	.4	19.4	6.5	333.
23.1	61.0	5905.9	493.0	-17.1	-34.9	194.7	3.3	.0	3.2	313.5	314.0	.4	19.5	6.6	334.
23.6	62.0	6028.5	485.0	-17.8	-35.5	186.0	3.2	.3	3.2	314.1	315.4	.4	19.5	6.7	334.
24.0	63.0	6152.0	477.0	-18.5	-33 9	184.4	2.6	.2	2.6	314.7	316.3	.4	24.0	6.7	335.
24.5	64.0	6278.7	469.0	-19.7	-33.2	191.2	1.4	.3	1.3	314.0	316.4	.5	20.7	6.0	335.
25.0	65.0	6406.1	461.0	-21.0	-34.5	183.7	1.4	.1	1.4	314.6	316.1	.4	20.3	6.0	335.
25.4	66.0	6535.2	453.0	-21.8	-35.6	192.3	1.1	.2	1.1	315.2	316.6	.4	27.3	6.0	335.
25.9	67.0	6649.6	446.0	-23.0	-36.4	220.0	.6	.4	.5	315.1	316.4	.4	20.0	6.0	335.
26.4	68.0	6781.9	438.0	-24.4	-37.4	255.0	.5	.5	.1	315.1	316.3	.3	20.4	6.0	335.
26.9	69.0	6899.0	431.0	-25.0	-38.1	298.3	.7	.7	-.2	314.7	315.8	.3	30.4	6.0	335.
27.4	70.0	7034.4	423.0	-27.1	-39.3	303.6	1.1	.9	-.6	314.7	315.7	.3	30.1	6.0	336.
27.9	71.0	7154.4	416.0	-28.2	-40.0	310.3	1.5	1.1	-1.0	314.8	315.8	.3	31.0	6.0	336.
28.4	72.0	7275.9	409.0	-29.4	-40.8	301.9	1.2	1.0	-.6	314.8	315.7	.3	31.6	6.7	336.
28.9	73.0	7399.0	402.0	-30.3	-41.6	226.1	.9	.6	.6	315.2	316.0	.2	31.9	6.7	336.
29.3	74.0	7541.7	394.0	-31.5	-42.3	209.7	1.6	.8	1.4	315.5	316.3	.2	33.0	6.7	336.
2 8	75 0	7660.4	387.0	-32.3	-43.3	223.7	2.3	1.6	1.7	316.0	316.8	.2	31.9	6.0	337.
30.3	76.0	7797.0	380.0	-32.9	-44.0	235.6	3.0	2.5	1.7	316.0	317.5	.2	31.6	6.0	337.
30.8	77.0	7927.6	373.0	-33.9	-44 8	242.1	3.5	3.1	1.6	317.3	317.9	.2	31.7	6.0	338.
31.2	78.0	8060.1	366.0	-35.0	-45.8	248.4	3.7	3.4	1.4	317.4	318.0	.2	31.9	6.8	339.
31.7	79.0	8175.1	360.0	-36.4	-47.0	256.8	3.7	3.6	.8	317.1	317.7	.1	32.0	6.6	340.
32.2	80.0	8310.9	353.0	-37.5	-48.0	263.6	3.5	3.4	.4	317.5	318.0	.1	32.0	6.8	341.
32.7	81.0	8440.0	346.0	-38.8	-49.0	267.8	3.1	3.1	.1	317.5	317.9	.1	32.5	6.8	342.
33.2	82.0	8560.6	340.0	-40.2	99.9	265.1	3.0	3.0	.3	317.2	999.9	99.9	999.9	6.7	342.
33.7	83.0	8710.3	333.0	-41.0	99.9	258.5	3.3	3.3	.7	318.0	999.9	99.9	999.9	6.7	343.
34.2	84.0	8833.7	327.0	-41.9	99.9	256.8	3.9	3.8	.9	318.3	999.9	99.9	999.9	6.7	344.
34.7	85.0	8979.9	320.0	-43.2	99.9	263.4	4.6	4.6	.5	318.6	999.9	99.9	999.9	6.7	345.
35.2	86.0	9107.0	314.0	-44.3	99.9	270.3	5.6	5.6	-.0	318.7	999.9	99.9	999.9	6.7	346.
35.8	87.0	9236.2	308.0	-44.9	99.9	266.9	6.6	6.6	.4	319.7	999.9	99.9	999.9	6.6	348.
36.3	88.0	9367.4	302.0	-46.0	99.9	258.7	7.2	7.0	1.4	319.9	999.9	99.9	999.9	6.6	350.
36.8	89.0	9523.2	295.0	-46.9	99.9	254.0	7.7	7.4	2.1	320.8	999.9	99.9	999.9	6.6	352.
37.3	90.0	9659.0	289.0	-48.2	99.9	254.8	8.0	7.7	2.2	320.9	999.9	99.9	999.9	6.7	354.
37.8	91.0	9796.9	283.0	-49.2	99.9	257.8	8.1	7.9	1.8	321.3	999.9	99.9	999.9	6.7	356.
38.2	92.0	9913.5	278.0	-50.4	99.9	261.1	8.3	8.2	1.3	321.2	999.9	99.9	999.9	6.7	358.
38.8	93.0	10055.7	272.0	-51.0	99.9	268.4	8.0	8.0	.2	322.3	999.9	99.9	999.9	6.8	0.
39.3	94.0	10200.4	266.0	-52.1	99.9	276.1	9.4	9.3	-1.8	322.8	999.9	99.9	999.9	6.8	2.
39.8	95.0	10347.8	260.0	-53.2	99.9	284.3	9.7	9.4	-2.4	323.4	999.9	99.9	999.9	6.7	5.

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STATION NO 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1815 GMT

160 12. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
40.3	96.0	10472.7	295.0	-54.0	99.9	288.5	9.7	9.2	-3.1	324.0	999.9	99.9	999.9	6.7	7.
40.8	97.0	10625.2	249.0	-55.1	99.9	286.6	9.4	8.9	-3.0	324.5	999.9	99.9	999.9	6.6	10.
41.4	98.0	10754.5	244.0	-55.7	99.9	287.6	9.3	8.8	-2.8	325.5	999.9	99.9	999.9	6.6	13.
41.9	99.0	10912.9	238.0	-56.4	99.9	290.2	9.3	8.7	-3.2	326.8	999.9	99.9	999.9	6.6	15.
42.5	100.0	11047.3	233.0	-57.4	99.9	291.1	9.6	8.9	-3.5	327.3	999.9	99.9	999.9	6.5	18.
43.0	101.0	1121[illegible].0	227.0	-57.9	99.9	285.0	9.9	9.6	-2.6	326.9	999.9	99.9	999.9	6.5	21.
43.6	102.0	11352.2	222.0	-58.8	99.9	273.5	11.1	11.1	-.7	329.7	999.9	99.9	999.9	6.6	24.
44.1	103.0	11524.8	216.0	-59.3	99.9	268.3	12.5	12.5	.4	331.5	999.9	99.9	999.9	6.6	27.
44.6	104.0	11678.7	211.0	-59.5	99.9	271.6	13.2	13.2	-.4	333.5	999.9	99.9	999.9	7.0	29
45.1	105.0	11820.7	206.0	-59.8	99.9	278.9	12.9	12.7	-2.0	335.2	999.9	99.9	999.9	7.1	32.
45.7	106.0	11943.2	202.0	-59.9	99.9	282.9	11.1	10.8	-2.5	337.1	999.9	99.9	999.9	7.3	36.
46.2	107.0	12099.5	197.0	-60.7	99.9	275.0	9.6	9.6	-.6	336.1	999.9	99.9	999.9	7.4	38
46.7	108.0	12299.5	192.0	-60.9	99.9	260.3	9.9	9.8	1.7	340.3	999.9	99.9	999.9	7.6	39.
47.2	109.0	12423.8	187.0	-60.3	99.9	251.3	11.4	10.8	3.6	343.8	999.9	99.9	999.9	7.9	41.
47.7	110.0	12558.8	183.0	-59.5	99.9	248.0	12.0	11.2	4.5	347.3	999.9	99.9	999.9	8.2	42.
48.2	111.0	12732.2	178.0	-59.5	99.9	246.8	11.9	10.9	4.7	350.1	999.9	99.9	999.9	8.5	43.
48.7	112.0	12874.4	174.0	-59.6	99.9	245.7	11.9	10.8	4.9	352.1	999.9	99.9	999.9	8.8	44.
49.3	113.0	13057.8	169.0	-59.1	99.9	243.4	12.5	11.1	5.6	355.9	999.9	99.9	999.9	9.2	45.
49.8	114.0	13207.7	165.0	-57.7	99.9	241.2	12.6	11.0	6.0	360.7	999.9	99.9	999.9	9.6	45.
50.3	115.0	13362.5	161.0	-57.7	99.9	239.7	12.4	10.7	6.3	363.2	999.9	99.9	999.9	10.0	46.
50.8	116.0	13521.7	157.0	-56.7	99.9	239.6	12.6	10.8	6.4	367.5	999.9	99.9	999.9	10.3	46.
51.4	117.0	13685.0	153.0	-57.4	99.9	240.9	12.9	11.3	6.3	369.1	999.9	99.9	999.9	10.8	47.
52.0	118.0	13852.4	149.0	-57.6	99.9	241.6	12.7	11.2	6.0	371.6	999.9	99.9	999.9	11.2	48.
52.6	119.0	14024.3	145.0	-57.4	99.9	238.5	12.8	10.9	6.7	374.8	999.9	99.9	999.9	11.7	48.
53.1	120.0	14200.9	141.0	-57.7	99.9	233.9	13.5	10.9	7.9	377.2	999.9	99.9	999.9	12.1	48.
53.7	121.0	14382.5	137.0	-57.7	99.9	229.3	14.7	11.1	9.6	380.4	999.9	99.9	999.9	12.6	49.
54.2	122.0	14569.3	133.0	-58.2	99.9	228.6	15.5	11.6	10.3	382.7	999.9	99.9	999.9	13.0	48.
54.7	123.0	14761.5	129.0	-58.[illegible]	99.9	230.3	15.6	12.0	10.0	386.0	999.9	99.9	999.9	13.5	49.
55.3	124.0	14909.3	126.0	-59.3	99.9	233.5	15.1	12.2	9.0	386.8	999.9	99.9	999.9	14.1	49.
55.9	125.0	15111.9	122.0	-58.2	99.9	234.5	13.6	11.0	7.9	392.3	999.9	99.9	999.9	14.6	49.
56.6	126.0	15268.9	119.0	-57.4	99.9	229.7	13.9	10.6	9.0	396.6	999.9	99.9	999.9	15.1	49.
57.2	127.0	15485.8	115.0	-57.4	99.9	227.5	16.5	12.1	11.1	400.5	999.9	99.9	999.9	15.7	49.
57.7	128.0	15652.3	112.0	-56.7	99.9	228.9	16.5	12.4	10.9	404.8	999.9	99.9	999.9	16.2	49.
58.4	129.0	15824.7	109.0	-56.1	99.9	232.4	15.6	12.4	9.5	409.2	999.9	99.9	999.9	16.9	49.
59.0	130.0	16002.0	105.0	-56.7	99.9	234.0	14.7	11.9	8.6	412.3	999.9	99.9	999.9	17.4	49.
59.6	131.[illegible]	16245.8	102.0	-56.7	99.9	231.5	12.4	9.7	7.7	415.6	999.9	99.9	999.9	17.9	49.
60.2	132.0	16434.8	99.0	-57.4	99.9	223.8	11.3	7.8	8.2	418.0	999.9	99.9	999.9	18.3	49.
60.9	133.0	16628.9	96.0	-58.1	99.9	218.4	12.0	7.4	9.4	420.4	999.9	99.9	999.9	18.8	49.
61.5	134.0	16828.1	93.0	-59.8	99.9	220.4	13.8	8.7	10.5	420.8	999.9	99.9	999.9	19.2	49.
62.2	135.0	17032.5	90.0	-60.9	99.9	225.0	16.2	11.5	11.5	422.7	999.9	99.9	999.9	19.9	49.
62.8	136.0	17243.3	87.0	-60.9	99.9	230.4	15.7	12.1	10.0	426.8	999.9	99.9	999.9	20.5	49.
63.5	137.0	17461.9	84.0	-60.2	99.9	237.3	12.6	10.6	6.8	432.6	999.9	99.9	999.9	21.1	49.
64.2	138.0	17689.2	81.0	-59.5	99.9	237.3	12.1	10.2	6.5	438.5	999.9	99.9	999.9	21.6	49.
64.8	139.0	17925.2	78.0	-59.8	99.9	241.8	11.3	10.0	5.3	442.6	999.9	99.9	999.9	22.0	49.
65.6	40.0	18171.2	75.0	-58.2	99.9	253.9	8.3	8.[illegible]	2.3	450.8	999.9	99.9	999.9	22.5	49.

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STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1961
1015 GMT

160 12. 8

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
66.3	141.0	18428.3	72.0	-58.1	99.9	247.1	4.6	4.2	1.8	456.5	999.9	99.9	999.9	22.7	50.
67.0	142.0	18686.6	70.0	-56.1	99.9	212.6	4.3	2.3	3.6	464.4	999.9	99.9	999.9	22.8	50.
67.8	143.0	18885.0	69.0	-56.2	99.9	206.4	7.2	3.2	6.4	469.9	999.9	99.9	999.9	23.1	49.
68.6	144.0	19176.0	64.0	-56.4	99.9	206.6	9.3	4.2	8.3	475.8	999.9	99.9	999.9	23.5	49.
69.3	145.0	19377.4	62.0	-56.7	99.9	209.0	9.7	4.8	8.4	479.4	999.9	99.9	999.9	23.9	49.
70.2	146.0	19691.1	59.0	-57.7	99.9	207.9	6.3	3.0	5.6	484.6	999.9	99.9	999.9	24.3	48.
71.0	147.0	19909.1	57.0	-56.9	99.9	213.7	6.5	3.6	5.4	490.7	999.9	99.9	999.9	24.5	48.
71.8	148.0	20251.7	54.0	-56.7	99.9	233.3	4.8	3.9	2.9	498.7	999.9	99.9	999.9	24.9	48.
72.7	149.0	20496.9	52.0	-56.9	99.9	248.3	2.1	1.9	.8	503.7	999.9	99.9	999.9	25.0	48.
73.7	150.0	20866.9	49.0	-57.4	99.9	180.2	2.7	.0	2.7	511.2	999.9	99.9	999.9	25.2	48.
74.7	151.0	21131.2	47.0	-55.7	99.9	96.2	3.1	-3.1	.3	521.3	999.9	99.9	999.9	25.1	48.
75.7	152.0	21400.0	45.0	-56.1	99.9	147.6	1.1	-.6	.9	527.8	999.9	99.9	999.9	25.0	48.
76.7	153.0	21847.0	42.0	-55.7	99.9	269.9	.8	.8	.0	539.3	999.9	99.9	999.9	25.1	48.
77.8	154.0	22318.0	39.0	-56.6	99.9	101.9	7.1	-6.9	1.5	547.8	999.9	99.9	999.9	25.1	47.
78.9	155.0	22653.4	37.0	-54.8	99.9	79.1	9.9	-9.7	-1.9	560.7	999.9	99.9	999.9	24.5	46.
79.9	156.0	23198.1	34.0	-54.1	99.9	27.9	6.4	-3.0	-5.6	576.1	999.9	99.9	999.9	24.2	46.
81.1	157.0	23804.4	32.0	-53.7	99.9	52.6	8.3	-6.6	-5.0	587.4	999.9	99.9	999.9	23.6	46.
82.6	158.0	24082.1	30.0	-50.7	99.9	44.8	8.6	-6.1	-6.1	606.4	999.9	99.9	999.9	22.9	46.
84.1	159.0	24692.1	27.0	-48.5	99.9	51.4	9.8	-7.6	-6.1	631.2	999.9	99.9	999.9	22.1	46.
85.6	160.0	25199.8	25.0	-48.0	99.9	55.3	13.0	-10.7	-7.4	646.5	999.9	99.9	999.9	20.9	45.
87.3	161.0	26043.6	22.0	-47.2	99.9	41.2	10.0	-6.6	-7.5	673.2	999.9	99.9	999.9	19.9	45.
89.3	162.0	26669.9	20.0	-50.4	99.9	30.2	8.9	-4.5	-7.7	681.9	999.9	99.9	999.9	18.6	46.
91.6	163.0	27741.4	17.0	-45.7	99.9	353.1	8.5	1.0	-8.5	729.3	999.9	99.9	999.9	17.9	48.
94.5	164.0	29045.9	14.0	-41.8	99.9	331.8	10.4	4.9	-9.2	784.3	999.9	99.9	999.9	17.2	52.
96.7	165.0	30163.4	12.0	-36.1	99.9	999.9	99.9	99.9	99.9	839.8	999.9	99.9	999.9	999.9	999.

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1818 GMT

147 14. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
0.0	20.0	1366.0	867.8	21.0	2.3	150.0	6.2	-3.1	5.4	306.3	321.3	5.2	29.0	0.0	0.
.3	21.0	1473.6	857.0	16.8	-2.4	114.9	6.6	-6.0	2.8	305.1	316.0	3.7	23.6	.1	298.
.6	22.0	1574.0	847.0	16.7	-5.9	113.3	6.6	-6.0	2.6	303.9	312.5	2.9	20.8	.2	297.
.8	23.0	1674.6	837.0	14.6	-6.9	110.0	6.4	-6.0	2.2	302.8	310.8	2.7	21.8	.3	297.
1.0	24.0	1775.9	827.0	13.3	-8.0	106.6	6.3	-6.0	1.8	302.4	309.9	2.5	21.9	.3	296.
1.3	25.0	1867.7	818.0	12.3	-8.0	109.7	6.6	-6.2	2.2	302.3	309.9	2.6	23.4	.4	292.
1.6	26.0	1970.5	808.0	11.5	-7.4	114.4	7.0	-6.4	2.9	302.6	310.6	2.7	25.7	.6	291.
1.8	27.0	2074.4	798.0	10.4	-7.6	119.4	7.5	-6.5	3.7	302.5	310.4	2.7	27.4	.6	292.
2.3	28.0	2168.6	789.0	9.7	-7.5	120.1	8.7	-7.5	4.4	302.7	310.8	2.8	28.9	.9	296.
2.5	29.0	2274.3	779.0	8.9	-8.1	117.9	9.1	-8.1	4.3	303.0	310.8	2.7	28.9	1.0	297.
2.8	30.0	2391.8	768.0	7.9	-8.4	117.2	9.9	-8.8	4.5	303.1	310.8	2.6	30.4	1.2	296.
3.1	31.0	2488.8	759.0	7.0	-8.6	117.8	10.6	-9.5	4.8	303.1	310.9	2.6	31.8	1.4	296.
3.4	32.0	2597.6	749.0	5.8	-8.6	117.9	11.1	-9.8	5.2	302.9	310.8	2.7	34.7	1.6	296.
3.7	33.0	2696.3	740.0	4.7	-8.8	116.4	11.5	-10.3	5.1	302.9	310.7	2.6	36.6	1.8	297.
4.0	34.0	2807.1	730.0	3.9	-9.1	114.8	11.9	-10.9	4.9	303.1	310.8	2.6	37.9	2.0	296.
4.3	35.0	2907.7	721.0	2.7	-9.5	112.8	11.3	-10.4	4.4	302.9	310.5	2.6	40.1	2.2	296.
4.6	36.0	3010.5	711.0	1.7	-9.5	112.0	10.9	-10.1	4.1	303.0	310.7	2.6	43.0	2.4	296.
5.0	37.0	3111.6	703.0	.7	-10.0	112.1	10.8	-10.0	4.1	302.9	310.8	2.4	41.5	2.6	295.
5.3	38.0	3215.0	694.0	.1	-14.6	110.1	10.0	-8.8	4.7	303.3	308.7	1.8	32.1	2.8	295.
5.7	39.0	3321.1	684.0	-.2	-21.3	130.6	8.9	-6.7	5.8	304.2	307.4	1.0	18.5	3.1	296.
6.1	40.0	3425.2	676.0	-.4	-20.7	145.6	8.6	-4.8	7.1	305.1	308.5	1.1	19.8	3.2	297.
6.4	41.0	3544.1	666.0	-1.5	-20.7	148.5	9.4	-4.9	8.1	305.1	308.6	1.1	21.5	3.4	299.
6.7	42.0	3652.4	657.0	-1.8	-22.2	150.8	9.7	-4.7	8.5	306.0	309.0	1.0	19.2	3.5	300.
7.0	43.0	3749.8	649.0	-2.0	-23.9	153.0	9.6	-4.4	8.6	306.9	309.6	.8	16.7	3.7	302.
7.4	44.0	3868.6	640.0	-2.8	-24.1	157.4	9.3	-3.6	8.6	307.2	309.9	.8	17.5	3.9	303.
7.7	45.0	3972.7	631.0	-3.4	-24.6	160.1	9.1	-3.1	8.6	307.7	310.4	.8	17.5	4.0	305.
8.1	46.0	4086.9	622.0	-4.6	-25.6	164.0	8.8	-2.4	8.4	307.6	310.1	.8	17.5	4.2	307.
8.4	47.0	4200.5	613.0	-5.5	-27.0	169.1	8.8	-1.5	7.8	307.8	310.0	.7	16.4	4.3	308.
8.7	48.0	4303.0	605.0	-5.8	-27.4	173.3	7.2	-.8	7.1	308.6	310.8	.7	16.2	4.4	309.
9.1	49.0	4420.7	596.0	-6.6	-28.0	178.9	6.8	-.1	6.8	309.1	311.2	.6	16.2	4.5	311.
9.3	50.0	4526.1	588.0	-7.0	-28.2	182.7	5.3	.4	5.2	309.8	311.9	.6	16.4	4.6	311.
9.7	51.0	4646.4	579.0	-7.6	-28.6	192.3	4.0	.9	3.9	310.5	312.5	.6	16.7	4.6	312.
10.1	52.0	4754.3	571.0	-8.0	-29.2	203.1	3.2	1.3	3.0	310.3	312.3	.6	17.2	4.6	313.
10.4	53.0	4877.1	562.0	-10.0	-30.3	206.6	3.0	1.3	2.7	310.4	312.2	.5	17.8	4.7	314.
10.8	54.0	4987.5	554.0	-10.7	-30.9	206.5	3.1	1.4	2.8	310.8	312.5	.5	17.8	4.7	315.
11.2	55.0	5099.1	546.0	-12.0	-32.1	202.9	3.5	1.4	3.2	310.6	312.1	.5	16.8	4.7	316.
11.5	56.0	5226.2	537.0	-12.5	-32.7	199.3	3.9	1.3	3.6	311.4	312.9	.4	16.6	4.7	316.
11.9	57.0	5340.7	529.0	-13.1	-32.4	205.7	3.8	1.7	3.5	312.0	313.6	.5	17.8	4.8	317.
12.3	58.0	5454.6	521.0	-14.1	-32.9	209.7	3.9	1.9	3.4	312.2	313.7	.5	18.4	4.8	318.
12.7	59.0	5571.0	513.0	-15.0	-33.7	214.8	4.0	2.3	3.3	312.4	313.9	.4	18.4	4.8	320.
13.1	60.0	5692.4	505.0	-16.1	-34.3	220.2	4.0	2.6	3.1	312.5	313.9	.4	19.1	4.9	321.
13.5	61.0	5812.4	497.0	-17.4	-35.0	220.8	3.9	2.6	3.0	312.4	313.7	.4	19.8	4.9	322.
13.9	62.0	5933.9	489.0	-17.9	-35.6	217.6	3.5	1.8	3.0	313.2	314.5	.4	19.5	4.9	323.
14.3	63.0	6057.0	481.0	-18.7	-36.4	201.5	3.0	1.1	2.8	313.7	314.9	.3	19.2	4.9	324.
14.7	64.0	6166.2	474.0	-19.4	-36.3	193.5	2.5	.6	2.5	314.1	315.4	.4	20.6	5.0	324.

* BY SPEED MEANS ELEVATION ANGLE BETWEEN 6 AND 10 DEG
+ BY TEMP MEANS TEMPERATURE OR TIME HAVE BEEN INTERPOLATED
** BY SPEED MEANS ELEVATION ANGLE LESS THAN 6 DEG

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1918 GMT

147 14. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
15.1	65.0	6292.3	466.0	-21.8	-35.5	198.1	1.8	.3	1.8	313.7	315.0	.4	25.7	5.0	325.
15.5	66.0	6420.1	456.0	-21.6	-34.4	200.1	.8	.3	.7	314.6	316.1	.4	30.0	5.0	325.
15.9	67.0	6533.3	451.0	22.9	-35.0	296.9	.2	.2	-.1	314.3	315.7	.4	31.9	5.0	325.
16.3	68.0	6647.7	444.0	-24.1	-35.4	348.4	.4	.1	-.4	314.2	315.6	.4	34.1	5.0	325.
16.7	69.0	6780.2	436.0	-25.0	-35.7	345.9	.5	.1	-.5	314.6	316.1	.4	36.0	5.0	325.
17.1	70.0	6897.5	429.0	-26.3	-36.9	322.4	.6	.4	-.5	314.4	315.7	.4	36.0	5.0	325.
17.5	71.0	7033.3	421.0	-27.5	-38.0	302.6	1.0	.8	-.5	314.6	315.8	.3	35.9	5.0	325.
17.9	72.0	7153.8	414.0	-28.3	-38.7	302.4	1.6	1.3	-.8	315.1	316.2	.3	35.7	5.0	325.
18.3	73.0	7275.9	407.0	-29.2	-39.6	299.2	1.9	1.6	-.9	315.4	316.5	.3	35.7	4.9	325.
18.8	74.0	7399.6	400.0	-30.3	-40.6	276.4	1.7	1.7	-.2	315.6	316.6	.3	35.5	4.9	326.
19.2	75.0	7524.9	393.0	-31.5	-41.7	248.9	1.9	1.7	.7	315.7	316.6	.2	35.3	4.9	326.
19.5	76.0	7651.8	386.0	-32.7	-42.8	235.9	2.2	1.8	1.2	315.8	316.5	.2	35.1	4.9	326.
19.9	77.0	7780.5	379.0	-33.6	-43.5	239.2	2.5	2.2	1.3	316.2	316.9	.2	35.6	4.9	327.
20.3	78.0	7910.9	372.0	-35.0	-44.9	240.4	2.8	2.4	1.4	315.9	316.6	.2	35.5	4.9	328.
20.8	79.0	8043.1	365.0	-36.2	-46.0	242.6	3.3	2.9	1.5	316.1	316.7	.2	35.5	4.8	329.
21.3	80.0	8177.2	358.0	-37.2	-46.8	245.0	3.7	3.4	1.5	316.6	317.1	.2	35.4	4.8	330.
21.7	81.0	8293.8	352.0	-38.3	-47.8	248.5	3.9	3.6	1.4	316.6	317.2	.1	35.4	4.8	331.
22.1	82.0	8431.6	345.0	-39.6	-49.1	252.3	3.9	3.7	1.2	316.6	317.1	.1	35.3	4.8	332.
22.4	83.0	8551.4	339.0	-40.4	99.9	257.0	3.7	3.6	.8	317.1	999.9	99.9	999.9	4.8	333.
22.8	84.0	8693.3	332.0	-41.7	99.9	264.4	3.7	3.7	.4	317.3	999.9	99.9	999.9	4.8	334.
23.2	85.0	8837.3	325.0	-43.1	99.9	266.9	3.8	3.8	.2	317.3	999.9	99.9	999.9	4.7	335.
23.7	86.0	8962.7	319.0	-44.0	99.9	268.1	4.1	4.0	.7	317.7	999.9	99.9	999.9	4.7	337.
24.1	87.0	9089.8	313.0	-45.2	99.9	253.8	4.6	4.5	1.3	317.8	999.9	99.9	999.9	4.7	338.
24.5	88.0	9218.7	307.0	-46.3	99.9	253.5	5.4	5.2	1.5	318.0	999.9	99.9	999.9	4.7	339.
24.9	89.0	9371.0	300.0	-47.0	99.9	262.4	6.2	6.2	.8	319.1	999.9	99.9	999.9	4.7	341.
25.3	90.0	9505.4	294.0	-47.8	99.9	270.1	7.3	7.3	-.0	319.9	999.9	99.9	999.9	4.6	343.
25.7	91.0	9641.2	288.0	-48.6	99.9	274.1	8.4	8.4	-.6	320.5	999.9	99.9	999.9	4.6	345.
26.2	92.0	9779.3	282.0	-49.8	99.9	273.8	9.6	9.6	-.6	320.8	999.9	99.9	999.9	4.5	346.
26.7	93.0	9919.8	276.0	-50.6	99.9	271.2	10.6	10.6	-.2	321.7	999.9	99.9	999.9	4.4	352.
27.0	94.0	10062.7	270.0	-51.6	99.9	270.4	11.1	11.1	-.1	322.1	999.9	99.9	999.9	4.4	355.
27.4	95.0	10208.1	264.0	-52.9	99.9	273.2	11.6	11.6	-.6	322.4	999.9	99.9	999.9	4.4	358.
27.8	96.0	10331.3	259.0	-53.7	99.9	277.3	11.8	11.7	-1.5	323.0	999.9	99.9	999.9	4.3	2.
28.3	97.0	10481.6	253.0	-54.8	99.9	283.7	11.7	11.4	-2.8	323.5	999.9	99.9	999.9	4.3	7.
28.8	98.0	10609.1	248.0	-55.4	99.9	288.1	11.8	11.3	-3.7	324.4	999.9	99.9	999.9	4.3	11.
29.2	99.0	10764.9	242.0	-56.4	99.9	288.3	12.0	11.4	-3.8	325.2	999.9	99.9	999.9	4.2	15.
29.6	100.0	10897.3	237.0	-57.1	99.9	286.1	12.0	11.6	-3.3	326.2	999.9	99.9	999.9	4.2	19.
29.9	101.0	11032.3	232.0	-57.1	99.9	283.9	11.7	11.3	-2.8	328.2	999.9	99.9	999.9	4.3	22.
30.3	102.0	11197.7	226.0	-58.1	99.9	281.1	10.5	10.3	-2.0	329.1	999.9	99.9	999.9	4.3	25.
30.7	103.0	11338.7	221.0	-58.1	99.9	277.6	9.4	9.3	-1.2	331.2	999.9	99.9	999.9	4.4	29.
31.1	104.0	11482.7	216.0	-58.4	99.9	273.7	8.6	8.6	-.6	332.9	999.9	99.9	999.9	4.5	31.
31.5	105.0	11630.0	211.0	-58.4	99.9	271.5	8.5	8.5	-.2	335.1	999.9	99.9	999.9	4.6	33.
32.0	106.0	11780.0	206.0	-58.6	99.9	270.1	9.0	9.0	-.0	337.1	999.9	99.9	999.9	4.7	36.
32.4	107.0	11904.1	202.0	-58.6	99.9	268.2	9.6	9.6	.3	339.0	999.9	99.9	999.9	4.8	38.
32.8	108.0	12061.5	197.0	-58.8	99.9	267.0	11.0	11.0	.6	341.2	999.9	99.9	999.9	5.0	40.
33.2	109.0	12223.0	192.0	-58.8	99.9	265.9	13.0	13.0	.9	343.7	999.9	99.9	999.9	5.2	42.

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STATION NO 4
TEHACHAPI, CALIF

14 APRIL 1981
1618 GMT

147 14. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
33.7	110.0	12388.6	187.0	-58.9	99.9	264.9	15.9	15.8	1.4	346.0	999.9	99.9	999.9	5.5	46.
34.2	111.0	12524.3	183.0	-58.9	99.9	264.5	17.7	17.6	1.7	346.2	999.9	99.9	999.9	6.0	49.
34.7	112.0	12698.1	178.0	-58.9	99.9	262.9	17.3	17.1	2.1	351.0	999.9	99.9	999.9	6.4	52.
35.2	113.0	12848.7	174.0	-59.1	99.9	257.0	15.8	15.4	3.6	353.0	999.9	99.9	999.9	6.8	54.
35.7	114.0	13023.5	169.0	-59.1	99.9	249.7	14.8	13.8	5.1	355.9	999.9	99.9	999.9	7.3	55.
36.2	115.0	13173.9	165.0	-58.4	99.9	246.1	14.2	13.0	5.7	359.5	999.9	99.9	999.9	7.7	55.
36.7	116.0	13328.4	161.0	-58.1	99.9	244.3	13.9	12.5	6.0	362.6	999.9	99.9	999.9	8.1	56.
37.2	117.0	13486.9	157.0	-5 .9	99.9	241.5	13.8	12.2	6.6	365.5	999.9	99.9	999.9	8.5	56.
37.7	118.0	13649.4	153.0	-58.6	99.9	238.2	14.2	12.1	7.5	367.1	999.9	99.9	999.9	8.9	56.
38.2	119.0	13816.1	149.0	-58.1	99.9	236.2	15.4	12.8	8.6	370.7	999.9	99.9	999.9	9.4	56.
38.7	120.0	13987.5	145.0	-58.1	99.9	236.1	16.6	13.8	9.3	373.6	999.9	99.9	999.9	9.8	56.
39.2	121.0	14163.6	141.0	-58.4	99.9	236.3	17.1	14.2	9.5	376.0	999.9	99.9	999.9	10.4	56.
39.7	122.0	14344.4	137.0	-59.1	99.9	234.9	16.8	13.8	9.7	377.9	999.9	99.9	999.9	10.9	56.
40.2	123.0	14483.1	134.0	-59.3	99.9	232.8	17.0	13.6	10.3	380.0	999.9	99.9	999.9	11.4	56.
40.8	124.0	14672.9	130.0	-59.5	99.9	231.5	17.9	14.0	11.2	383.0	999.9	99.9	999.9	12.0	56.
41.4	125.0	14868.9	126.0	-58.8	99.9	230.6	18.3	14.2	11.6	387.7	999.9	99.9	999.9	12.7	56.
42.0	126.0	15020.3	123.0	-58.4	99.9	231.9	18.7	14.7	11.5	391.0	999.9	99.9	999.9	13.3	56.
42.6	127.0	15229.1	119.0	-56.7	99.9	235.1	17.5	14.4	10.0	397.0	999.9	99.9	999.9	14.0	55.
43.2	128.0	15398.7	116.0	-57.2	99.9	234.2	15.7	12.7	9.2	399.0	999.9	99.9	999.9	14.6	55.
43.9	129.0	15612.4	112.0	-57.7	99.9	228.7	15.7	11.8	10.4	402.9	999.9	99.9	999.9	15.1	55.
44.3	130.0	15783.9	109.0	-57.4	99.9	225.3	17.0	12.1	11.9	406.7	999.9	99.9	999.9	15.6	55.
45.0	131.0	15960.3	106.0	-57.4	99.9	226.3	19.0	13.7	13.2	410.0	999.9	99.9	999.9	16.3	55.
45.6	132.0	16141..	103.0	-57.4	99.9	229.3	20.1	15.3	13.1	413.3	999.9	99.9	999.9	17.1	54.
46.2	133.0	16391.6	99.0	-58.1	99.9	230.1	19.6	15.1	12.6	416.7	999.9	99.9	999.9	17.8	54.
46.7	134.0	16585.0	96.0	-59.1	99.9	228.1	18.1	13.5	12.1	418.4	999.9	99.9	999.9	18.3	54.
47.3	135.0	16783.4	93.0	-60.7	99.9	222.7	16.6	11.3	12.2	419.1	999.9	99.9	999.9	19.0	54.
47.9	136.0	16987.3	90.0	-60.9	99.9	217.8	16.7	10.2	13.2	422.7	999.9	99.9	999.9	19.5	53.
48.6	137.0	17198.9	87.0	-59.3	99.9	218.4	19.6	12.2	15.4	430.0	999.9	99.9	999.9	20.2	52.
49.2	138.0	17418.4	84.0	-60.0	99.9	223.0	20.0	14.2	15.2	432.9	999.9	99.9	999.9	21.0	52.
49.7	139.0	17645.9	81.0	-59.3	99.9	228.0	17.5	13.0	11.7	438.9	999.9	99.9	999.9	21.6	52.
50.4	140.0	17882.9	79.0	-58.2	99.9	233.8	11.3	9.1	6.7	444.2	999.9	99.9	999.9	22.2	52.
51.2	141.0	18046.5	76.0	-58.4	99.9	233.5	11.5	9.2	6.8	448.8	999.9	99.9	999.9	22.7	52.
51.9	142.0	18299.4	73.0	-59.1	99.9	244.8	14.2	12.8	6.2	452.5	999.9	99.9	999.9	23.2	52.
52.6	143.0	18562.8	70.0	-58.6	99.9	250.4	12.7	12.0	4.3	459.1	999.9	99.9	999.9	23.8	53.
53.3	144.0	18745.2	68.0	-58.2	99.9	233.7	10.0	8.1	5.9	463.6	999.9	99.9	999.9	24.2	53.
54.0	145.0	19029.9	65.0	-57.2	99.9	215.2	9.6	5.5	7.8	471.9	999.9	99.9	999.9	24.7	53.
54.7	146.0	19227.7	63.0	-56.9	99.9	211.7	9.8	5.2	8.4	476.8	999.9	99.9	999.9	25.0	52.
55.5	147.0	19536.4	60.0	-57.4	99.9	208.3	9.5	4.5	8.3	482.4	999.9	99.9	999.9	25.5	52.
56.3	148.0	19758.6	58.0	-57.4	99.9	214.6	8.6	4.9	7.0	487.1	999.9	99.9	999.9	25.8	52.
57.1	149.0	20006.0	55.0	-57.7	99.9	222.1	7.0	5.3	5.4	493.8	999.9	99.9	999.9	26.3	51.
57.9	150.0	20319.5	53.0	-58.1	99.9	224.0	7.0	5.5	5.5	498.3	999.9	99.9	999.9	26.6	51.
58.7	151.0	20606.1	50.0	-58.0	99.9	231.1	7.6	5.9	4.8	505.0	999.9	99.9	999.9	27.0	51.
59.6	152.0	20942.6	48.0	-58.4	99.9	217.6	2.2	1.4	1.8	511.0	999.9	99.9	999.9	27.3	51.
60.6	153.0	21211.6	46.0	-56.4	99.9	198.2	3.2	1.0	3.0	522.9	999.9	99.9	999.9	27.3	51.
61.4	154.0	21639.3	43.0	-56.9	99.9	192.5	3.8	.8	3.7	531.9	999.9	99.9	999.9	27.5	51.

* BY SPEED MEANS ELEVATION ANGLE BETWEEN 6 AND 10 DEG
• BY TEMP MEANS TEMPERATURE OR TIME HAVE BEEN INTERPOLATED
** BY SPEED MEANS ELEVATION ANGLE LESS THAN 6 DEG

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1810 GMT

147 14. 0

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	U COMP M/SEC	V COMP M/SEC	POT T DG K	E POT T DG K	MX RTO GM/KG	RH PCT	RANGE KM	AZ DG
62.4	155.0	21941.8	41.0	-55.7	99.9	112.3	2.5	-2.3	.9	542.0	999.9	99.9	999.9	27.5	51.
63.5	156.0	22259.8	39.0	-56.4	99.9	23.1	3.3	-1.3	-3.0	548.2	999.9	99.9	99.9	27.4	51.
64.6	157.0	22778.3	36.0	-54.5	99.9	65.3	7.4	-6.7	-3.1	565.9	999.9	99.9	999.9	27.1	51.
65.7	158.0	23136.7	34.0	-54.1	99.9	99.9	5.9	-5.8	1.0	576.1	999.9	99.9	999.9	26.7	50.
66.8	159.0	23730.4	31.0	-53.3	99.9	56.9	7.3	-6.1	-4.0	593.6	999.9	99.9	999.9	26.4	50.
68.3	160.0	24163.5	29.0	-49.5	99.9	65.5	10.1	-9.2	-4.2	615.6	999.9	99.9	999.9	25.5	49.
69.7	161.0	24879.8	26.0	-48.9	99.9	60.9	10.9	-9.5	-5.3	636.8	999.9	99.9	999.9	24.7	49.
71.2	162.0	25405.8	24.0	-48.6	99.9	50.1	16.0	-13.6	-8.5	652.4	999.9	99.9	999.9	23.5	48.
72.9	163.0	25978.6	22.0	-48.2	99.9	50.2	10.6	-8.2	-6.8	670.2	999.9	99.9	999.9	22.1	48.
74.8	164.0	26944.4	19.0	-48.3	99.9	41.5	12.7	-8.4	-9.5	698.4	999.9	99.9	999.9	20.8	48.
77.0	165.0	27680.1	17.0	-46.3	99.9	20.7	9.7	-3.4	-9.0	727.5	999.9	99.9	999.9	19.2	49.
79.6	166.0	28983.4	14.0	-41.7	99.9	999.9	99.9	99.9	99.9	784.8	999.9	99.9	999.9	999.9	999.

APPENDIX B

30-Second Data

PRECEDING PAGE BLANK NOT FILMED

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1535 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
0.0	6.7	168.0	1001.4	17.0	8.7	350.0	.5	58.0
.5	7.8	276.2	988.8	15.7	4.4	290.1	.3	47.0
1.0	9.3	418.0	972.3	14.4	3.6	239.2	.6	47.9
1.5	11.0	578.6	954.0	14.1	3.4	243.3	2.0	48.7
2.0	12.5	716.9	938.5	13.7	3.7	244.4	1.8	50.8
2.5	14.3	882.1	920.3	13.0	3.0	219.5	.4	50.8
3.0	15.5	1004.0	907.0	12.5	3.0	111.5	.6	52.5
3.5	16.8	1120.3	894.5	11.5	2.8	129.4	.6	55.3
4.0	18.3	1270.9	878.5	10.6	2.5	55.7	.4	57.0
4.5	19.5	1390.4	866.0	10.3	1.3	80.5	1.4	53.9
5.0	20.6	1503.0	854.4	11.8	-1.8	123.7	3.4	39.4
5.5	22.0	1645.1	840.0	11.9	-8.8	135.7	6.1	22.4
6.0	23.5	1785.6	826.0	11.2	-9.3	118.2	7.5	22.7
6.5	24.6	1897.3	815.0	10.9	-8.5	115.5	8.9	24.6
7.0	25.8	2015.7	803.5	10.5	-8.1	118.9	9.5	26.0
7.5	27.0	2145.9	791.0	9 7	-8.2	122.9	9.5	27.4
8.0	28.5	2304.5	776.0	8.3	-8.5	124.3	9.6	29.3
8.5	29.8	2438.3	763.5	7.1	-8.5	125.9	9.6	32.1
9.0	31.0	2573.5	751.0	5.4	-9.3	127.5	10.0	33.6
9.5	32.3	2710.5	738.5	4.4	-9.5	126.8	11.1	35.6
10.0	33.5	2843.6	726.5	3.2	-10.1	126.8	11.4	37.0
10.5	34.8	2969.9	715.3	2.0	-11.5	127.8	11.4	35.9
11.0	36.3	3134.9	700.8	1.3	-13.5	130.9	10.6	32.3
11.5	37.5	3264.8	689.5	-.2	-14.2	137.4	9.4	33.8
12.0	38.6	3387.5	679.0	-1.2	-15.6	146.4	8.7	32 4
12.5	39.8	3514.6	668.3	-1.3	-18.3	155.7	8.5	26.1
13.0	41.3	3680.3	654.5	-1.6	-23.0	167.2	7.3	17.6
13.5	42.5	3821.1	643.0	-2.5	-24.3	183.7	5.7	16.8
14.0	43.6	3937.8	633.6	-3.2	-25.2	190.3	4.9	16.4
14.5	44.8	4067.8	623.3	-4.5	-26.1	181.4	4.4	16.4
15.0	46.0	4210.8	612.0	-5.5	-27.0	166.2	4.2	16.4
15.5	47.3	4356.1	600.8	-6.5	-27.8	163.8	4.1	16.4
16.0	48.4	4491.9	590.4	-6.9	-28.2	170.7	4.0	16.3
16.5	49.5	4623.7	580.5	-7.5	-28.6	182.0	3.9	16.6
17.0	50.6	4749.2	571.2	-7.9	-28.8	193.3	3.6	16.7
17.5	51.8	4885.6	561.3	-8.8	-28.6	202.3	3.1	18.3
18.0	53.0	5027.9	551.0	-10.0	-29.2	202.9	2.6	18.9
18.5	54.3	5183.3	540.0	-10.9	-30.0	196.8	2.5	19.0
19.0	55.5	5333.9	529.5	-12.2	-30.9	203.0	2.3	19.3
19.5	56.6	5469.0	520.2	-13.5	-31.9	214.8	2.2	19.3
20.0	57.6	5586.6	512.2	-14.6	-32.8	214.1	2.2	19.4
20.5	58.8	5723.6	503.0	-16.0	-34.0	200.8	2.4	19.4
21.0	60.0	5874.4	493.0	-17.0	-34.8	190.2	2.6	19.4
21.5	61.3	6026.1	483.0	-18.0	-35.8	193.6	2.2	19.2
22.0	62.4	6177.9	473.4	-19.3	-36.5	204.6	1.7	20.0
22.5	63.4	6307.4	465.2	-20.5	-36.9	212.4	1.4	21.3
23.0	64.5	6438.8	457.0	-21.8	-36.9	207.8	1.5	23.7
23.5	65.8	6588.9	447.8	-23.4	-37.2	206.5	1.8	26.7
24.0	67.0	6749.4	438.0	-24.9	-35.8	213.4	2.0	35.1
24.5	68.3	6912.7	428.3	-26.6	-37.4	231.4	1.7	34.9

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1535 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
25.0	69.4	7049.4	420.2	-28.2	-38.6	251.9	1.6	35.6
25.5	70.5	7190.5	412.0	-29.6	-39.8	263.4	1.8	36.3
26.0	71.6	7333.5	403.8	-30.6	-40.6	267.4	2.1	36.4
26.5	72.6	7468.4	396.2	-31.4	-41.4	266.8	2.4	36.4
27.0	73.6	7590.6	389.4	-32.3	-42.2	256.6	2.5	36.6
27.5	74.8	7730.3	381.8	-33.5	-43.1	238.7	2.6	36.7
28.0	75.8	7881.7	373.6	-33.9	-43.7	227.2	2.7	36.3
28.5	77.0	8044.3	365.0	-35.3	-44.9	227.8	2.6	36.3
29.0	78.3	8193.3	357.3	-37.3	-46.6	240.8	2.7	36.5
29.5	79.4	8350.4	349.2	-38.8	-48.1	255.2	3.2	36.1
30.0	80.4	8469.0	342.2	-40.1	99.9	265.1	3.5	999.9
30.5	81.4	8621.6	335.6	-41.1	99.9	270.2	3.4	999.9
31.0	82.4	8743.9	329.6	-42.4	99.9	273.9	3.0	999.9
31.5	83.7	8915.3	321.3	-43.4	99.9	281.1	2.6	999.9
32.0	84.7	9048.6	315.0	-44.5	99.9	284.8	2.4	999.9
32.5	85.8	9188.0	308.5	-46.0	99.9	279.7	2.3	999.9
33.0	86.8	9342.7	301.4	-46.9	99.9	277.4	2.8	999.9
33.5	87.8	9480.2	295.2	-47.4	99.9	280.9	3.6	999.9
34.0	88.8	9615.8	289.2	-48.2	99.9	283.6	4.3	999.9
34.5	89.8	9753.4	283.2	-49.9	99.9	288.5	5.2	999.9
35.0	90.8	9893.2	277.2	-50.9	99.9	294.1	6.5	999.9
35.5	91.8	10035.4	271.2	-51.9	99.9	294.6	7.6	999.9
36.0	93.0	10184.6	265.0	-53.2	99.9	288.7	8.2	999.9
36.5	94.0	10332.0	259.0	-53.8	99.9	280.1	9.0	999.9
37.0	95.0	10482.0	253.0	-55.4	99.9	277.6	9.5	999.9
37.5	96.2	10640.3	246.8	-55.9	99.9	281.0	9.8	999.9
38.0	97.3	10797.9	240.8	-56.9	99.9	285.1	10.6	999.9
38.5	98.4	10950.7	235.0	-58.0	99.9	288.8	11.7	999.9
39.0	99.4	11097.1	229.6	-58.8	99.9	291.5	12.1	999.9
39.5	100.4	11251.7	224.0	-59.5	99.9	292.6	11.8	999.9
40.0	101.4	11393.0	219.0	-59.6	99.9	290.9	11.0	999.9
40.5	102.4	11537.4	214.0	-59.8	99.9	285.8	10.5	999.9
41.0	103.5	11700.2	208.5	-59.8	99.9	280.2	10.5	999.9
41.5	104.6	11867.0	203.0	-60.4	99.9	277.3	10.8	999.9
42.0	105.6	12022.2	198.0	-61.1	99.9	274.7	10.9	999.9
42.5	106.6	12181.1	193.0	-61.0	99.9	269.9	11.0	999.9
43.0	107.6	12344.5	188.0	-60.5	99.9	263.1	11.1	999.9
43.5	108.6	12492.0	183.6	-59.7	99.9	257.1	11.5	999.9
44.0	109.6	12651.4	179.0	-58.6	99.9	253.7	12.0	999.9
44.5	110.6	12807.8	174.6	-58.2	99.9	252.0	12.7	999.9
45.0	111.6	12976.1	170.0	-58.1	99.9	250.7	13.4	999.9
45.5	112.5	13125.9	166.0	-58.2	99.9	249.4	13.7	999.9
46.0	113.4	13264.0	162.4	-58.2	99.9	248.1	13.6	999.9
46.5	114.4	13437.3	158.0	-57.9	99.9	246.3	13.2	999.9
47.0	115.4	13623.5	153.4	-57.7	99.9	244.4	12.8	999.9
47.5	116.3	13778.8	149.7	-58.2	99.9	243.0	12.8	999.9
48.0	117.2	13920.3	146.3	-58.5	99.9	242.7	13.5	999.9
48.5	118.0	14064.7	143.0	-59.1	99.9	243.6	14.9	999.9
49.0	118.8	14212.9	139.7	-59.1	99.9	245.5	15.8	999.9
49.5	119.7	14364.5	136.3	-59.5	99.9	245.7	15.7	999.9

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1535 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
50.0	120.5	14519.6	133.0	-59.5	99.9	243.7	15.3	999.9
50.5	121.4	14671.7	129.8	-59.3	99.9	240.4	15.4	999.9
51.0	122.3	14825.3	126.7	-59.0	99.9	238.8	16.7	999.9
51.5	123.2	14992.5	123.3	-58.4	99.9	240.2	17.9	999.9
52.0	124.0	15164.4	120.0	-58.4	99.9	244.7	17.5	999.9
52.5	124.8	15297.2	117.5	-58.1	99.9	249.4	16.2	999.9
53.0	125.7	15469.8	114.3	-58.1	99.9	250.1	15.2	999.9
53.5	126.5	15627.7	111.5	-58.1	99.9	247.4	14.2	999.9
54.0	127.3	15770.5	109.0	-58.0	99.9	243.5	13.3	999.9
54.5	128.2	15926.8	106.3	-57.9	99.9	240.2	12.4	999.9
55.0	129.0	16127.1	103.0	-57.6	99.9	235.9	10.7	999.9
55.5	129.8	16282.0	100.5	-59.8	99.9	225.1	9.8	999.9
56.0	130.7	16440.1	98.0	-59.6	99.9	217.5	10.4	999.9
56.5	131.5	16601.5	95.5	-60.3	99.9	214.9	11.3	999.9
57.0	132.3	16757.1	93.1	-60.9	99.9	214.9	12.0	999.9
57.5	133.0	16901.1	91.0	-60.9	99.9	215.2	12.5	999.9
58.0	133.7	17050.0	88.9	-60.9	99.9	216.4	13.8	999.9
58.5	134.5	17217.4	86.5	-60.9	99.9	219.2	14.7	999.9
59.0	135.3	17381.2	84.3	-60.7	99.9	222.9	14.8	999.9
59.5	135.9	17521.0	82.4	-60.4	99.9	226.7	14.1	999.9
60.0	136.7	17704.3	80.0	-59.5	99.9	229.3	13.5	999.9
60.5	137.4	17886.4	77.7	-58.5	99.9	233.1	13.4	999.9
61.0	138.1	18057.2	75.6	-57.8	99.9	237.6	13.4	999.9
61.5	138.8	18215.9	73.8	-58.0	99.9	242.1	12.6	999.9
62.0	139.4	18354.5	72.1	-57.9	99.9	246.0	11.3	999.9
62.5	140.1	18488.8	70.6	-57.5	99.9	248.2	9.8	999.9
63.0	140.8	18659.4	68.8	-57.1	99.9	241.9	8.5	999.9
63.5	141.4	18850.5	66.7	-56.5	99.9	231.4	6.7	999.9
64.0	142.1	19042.6	64.7	-55.9	99.9	214.2	5.0	999.9
64.5	142.9	19184.6	63.3	-55.9	99.9	202.5	4.4	999.9
65.0	143.5	19368.0	61.5	-56.3	99.9	199.6	4.7	999.9
65.5	144.1	19546.8	59.8	-56.7	99.9	201.5	5.2	999.9
66.0	144.7	19666.3	58.7	-56.6	99.9	211.7	5.6	999.9
66.5	145.3	19822.2	57.3	-56.5	99.9	219.0	6.0	999.9
67.0	145.9	20032.8	55.4	-56.4	99.9	223.6	6.2	999.9
67.5	146.5	20192.5	54.0	-56.5	99.9	226.6	6.5	999.9
68.0	147.1	20356.2	52.6	-56.7	99.9	230 3	6.6	999.9
68.5	147.8	20586.8	50.7	-57.2	99.9	240.1	5.8	999.9
69.0	148.3	20756.5	49.4	-57.2	99.9	247.3	4.5	999.9
69.5	148.8	20885.7	48.4	-56.9	99.9	255.4	3.0	999.9
70.0	149.3	21073.8	47.0	-56.7	99.9	248.8	.8	999.9
70.5	149.9	21301.1	45.3	-56.7	99.9	95.8	1.9	999.9
71.0	150.4	21474.7	44.1	-56.6	99.9	108.3	2.7	999.9
71.5	151.0	21635.0	43.0	-56.4	99.9	122.3	3.1	999.9
72.0	151.5	21864.7	41.5	-56.2	99.9	138.4	1.0	999.9
72.5	152.0	22094.5	40.0	-56.1	99.9	278.8	1.3	999.9
73.0	152.5	22242.8	39.1	-55.9	99.9	3.6	3.1	999.9
73.5	152.9	22391.2	38.2	-55.8	99.9	16.0	6.2	999.9
74.0	153.4	22559.2	37.2	-55.0	99.9	25.9	6.2	999.9
74.5	153.9	22732.1	36.2	-54.0	99.9	39.4	5.6	999.9

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1535 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
75.0	154.4	22990.7	34.8	-53.6	99.9	46.7	5.6	999.9
75.5	154.9	23270.6	33.3	-53.3	99.9	52.1	5.7	999.9
76.0	155.3	23450.1	32.4	-53.6	99.9	51.6	6.8	999.9
76.5	155.7	23604.5	31.6	-54.2	99.9	50.3	8.1	999.9
77.0	156.1	23774.7	30.8	-54.5	99.9	49.9	9.3	999.9
77.5	156.4	24008.1	29.7	-54.1	99.9	51.8	9.8	999.9
78.0	156.8	24241.5	28.6	-53.6	99.9	53.5	10.4	999.9
78.5	157.1	24445.5	27.7	-53.0	99.9	53.1	10.9	999.9
79.0	157.5	24605.6	27.1	-52.1	99.9	50.0	11.5	999.9
79.5	157.8	24765.6	26.4	-51.1	99.9	47.2	12.0	999.9
80.0	158.2	24941.9	25.7	-50.6	99.9	42.3	12.4	999.9
80.5	158.5	25142.5	24.9	-50.7	99.9	34.0	12.6	999.9
81.0	158.9	25343.1	24.2	-50.9	99.9	26.0	13.0	999.9
81.5	159.2	25589.0	23.3	-50.2	99.9	27.2	12.2	999.9
82.0	159.5	25846.2	22.4	-49.5	99.9	31.3	11.1	999.9
82.5	159.8	26103.5	21.5	-48.7	99.9	36.3	10.0	999.9
83.0	160.1	26359.5	20.7	-48.1	99.9	37.6	9.6	999.9
83.5	160.4	26613.7	20.0	-48.0	99.9	32.4	9.9	999.9
84.0	160.6	26867.9	19.2	-47.9	99.9	27.6	10.4	999.9
84.5	160.9	27122.1	18.5	-47.8	99.9	23.2	10.9	999.9
85.0	161.1	27337.6	17.8	-47.3	99.9	20.8	11.1	999.9
85.5	161.3	27495.2	17.4	-46.1	99.9	21.0	10.8	999.9
86.0	161.5	27652.8	17.0	-44.9	99.9	21.2	10.4	999.9
86.5	161.7	27810.4	16.6	-43.7	99.9	21.5	10.1	999.9
87.0	161.9	27968.0	16.2	-42.5	99.9	21.7	9.8	999.9
87.5	162.1	28179.9	15.8	-41.8	99.9	999.9	99.9	999.9
88.0	162.3	28473.4	15.1	-41.6	99.9	999.9	99.9	999.9
88.5	162.5	28766.9	14.5	-41.5	99.9	999.9	99.9	999.9
89.0	162.7	29060.4	13.9	-41.4	99.9	999.9	99.9	999.9
89.5	162.9	29353.9	13.2	-41.3	99.9	999.9	99.9	999.9

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1541 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
0.0	19.1	1366.0	867.4	9.0	3.8	60.0	4.1	70.0
.5	20.5	1531.0	850.5	13.4	-2.7	93.0	4.9	34.9
1.0	22.0	1685.3	835.0	12.7	-8.8	86.4	6.3	21.4
1.5	23.5	1842.4	819.5	12.1	-9.1	95.5	8.0	21.7
2.0	24.8	1976.0	806.5	11.5	-8.4	109.6	8.5	23.9
2.5	26.3	2132.2	791.5	9.5	-8.8	117.5	8.3	26.5
3.0	27.5	2264.2	779.0	8.9	-7.8	116.8	8.9	29.8
3.5	29.0	2424.5	764.0	7.3	-7.8	116.0	10.5	33.1
4.0	30.5	2587.4	749.0	5.7	-7.9	113.0	10.8	36.9
4.5	31.8	2724.7	736.5	4.4	-7.9	110.1	11.2	40.4
5.0	33.3	2891.7	721.5	2.6	-8.2	111.2	11.7	44.5
5.5	34.5	3027..	709.5	1.4	-8.6	115.2	11.6	47.3
6.0	35.8	3164.2	697.5	.2	-8.8	116.2	11.5	50.8
6.5	37.3	3326.2	683.5	-1.7	-12.7	122.4	11.0	45.9
7.0	38.4	3456.6	672.4	-1.7	-22.9	134.4	10.0	18.0
7.5	39.7	3600.5	660.3	-2.0	-24.3	144.3	9.3	16.2
8.0	41.0	3750.1	648.0	-2.2	-24.5	152.7	9.5	16.1
8.5	42.3	3889.0	636.8	-3.4	-25.7	154.7	10.1	15.7
9.0	43.5	4036.1	625.0	-4.3	-26.1	154.0	10.5	16.4
9.5	44.8	4185.1	613.3	-5.7	-26.9	153.9	10.2	16.8
10.0	46.0	4329.8	602.0	-7.0	-27.8	156.8	9.5	17.1
10.5	47.3	4476.7	590.8	-8.1	-29.2	163.7	7.8	16.3
11.0	48.5	4625.9	579.5	-8.8	-29.9	174.3	5.4	16.1
11.5	49.6	4751.0	570.2	-9.5	-30.4	186.0	3.5	16.4
12.0	50.6	4868.2	561.6	-10.5	-31.1	189.9	2.5	16.3
12.5	51.8	5011.0	551.3	-11.7	-32.1	187.5	2.3	16.4
13.0	53.0	5154.5	541.0	-12.2	-32.6	192.1	2.3	16.4
13.5	54.2	5305.6	530.4	-13.1	-32.7	210.2	2.1	17.4
14.0	55.3	5430.7	521.8	-14.1	-33.4	221.6	2.1	17.6
14.5	56.4	5576.6	511.8	-15.2	-34.2	223.8	2.4	17.7
15.0	57.5	5707.4	503.0	-16.2	-35.2	221.0	2.5	17.5
15.5	58.6	5840.0	494.2	-17.2	-36.4	206.3	2.3	16.8
16.0	59.6	5962.2	486.2	-18.0	-36.9	187.4	2.2	17.1
16.5	60.6	6086.1	478.2	-18.8	-36.5	172.1	2.2	19.3
17.0	61.8	6230.4	469.0	-20.2	-34.4	162.4	1.8	26.9
17.5	63.0	6389.6	459.0	-21.6	-34.1	174.7	.7	31.0
18.0	64.0	6502.6	452.0	-22.8	-35.1	129.4	.2	31.3
18.5	65.3	6666.5	442.0	-24.0	-35.6	58.5	.7	33.2
19.0	66.4	6812.8	433.2	-25.5	-36.9	359.1	1.3	33.5
19.5	67.4	6937.6	425.8	-26.7	-38.1	331.1	2.0	32.7
20.0	68.4	7067.4	418.2	-27.6	-39.0	311.1	2.3	32.4
20.5	69.5	7200.7	410.5	-28.9	-40.1	294.7	2.4	32.9
21.0	70.6	7335.9	402.8	-30.0	-40.9	282.7	2.1	33.2
21.5	71.8	7479.4	394.8	-30.9	-41.7	266.9	1.5	33.4
22.0	73.0	7637.8	386.0	-32.5	-43.1	233.1	.9	33.5
22.5	74.2	7792.7	377.6	-33.8	-44.3	229.5	.9	33.7
23.0	75.2	7923.5	370.6	-35.0	-45.3	222.3	.9	34.0
23.5	76.2	8056.2	363.6	-36.4	-46.4	211.5	.9	34.3
24.0	77.2	8190.7	356.6	-37.5	-47.3	218.9	1.0	34.6
24.5	78.2	8323.2	349.8	-38.7	-48.3	243.4	1.1	35.1

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1541 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
25.0	79.2	8445.0	343.6	-39.9	99.9	265.5	1.5	999.9
25.5	80.2	8582.0	336.0	-40.9	99.9	282.9	2.0	999.9
26.0	81.2	8720.1	330.6	-42.1	99.9	295.4	2.1	999.9
26.5	82.2	8860.4	323.0	-43.3	99.9	306.0	2.1	999.9
27.0	83.2	8974.0	317.8	-44.5	99.9	312.5	2.3	999.9
27.5	84.2	9165.8	311.6	-45.4	99.9	314.2	2.3	999.9
28.0	85.2	9252.5	304.8	-46.7	99.9	314.6	2.3	999.9
28.5	86.2	9384.1	298.8	-47.7	99.9	313.9	2.6	999.9
29.0	87.3	9530.3	292.3	-48.7	99.9	312.3	2.9	999.9
29.5	88.4	9695.0	285.0	-49.7	99.9	309.3	3.9	999.9
30.0	89.4	9829.6	279.2	-50.4	99.9	304.4	5.2	999.9
30.5	90.4	9975.7	273.0	-51.2	99.9	299.7	6.7	999.9
31.0	91.4	10105.4	267.6	-52.1	99.9	297.1	8.1	999.9
31.5	92.4	10242.0	262.0	-52.9	99.9	296.2	9.2	999.9
32.0	93.4	10376.1	256.6	-54.1	99.9	295.5	9.9	999.9
32.5	94.4	10517.3	251.0	-55.2	99.9	293.9	10.8	999.9
33.0	95.4	10656.0	245.6	-55.9	99.9	290.6	10.2	999.9
33.5	96.4	10802.4	240.0	-56.8	99.9	287.0	11.4	999.9
34.0	97.4	10946.4	234.6	-57.8	99.9	285.9	13.5	999.9
34.5	98.4	11087.3	229.4	-58.6	99.9	286.8	15.2	999.9
35.0	99.4	11220.4	224.6	-58.9	99.9	287.1	15.5	999.9
35.5	100.3	11369.1	219.3	-59.0	99.9	285.9	14.4	999.9
36.0	101.2	11489.2	215.2	-59.2	99.9	282.9	12.8	999.9
36.5	102.0	11611.5	211.0	-59.6	99.9	277.3	11.2	999.9
37.0	103.0	11761.6	206.0	-59.3	99.9	271.6	11.1	999.9
37.5	104.0	11915.2	201.0	-60.2	99.9	272.0	12.2	999.9
38.0	105.0	12040.4	197.0	-60.9	99.9	274.5	13.1	999.9
38.5	106.0	12200.3	192.0	-60.7	99.9	273.8	13.1	999.9
39.0	106.8	12337.4	187.8	-60.1	99.9	267.8	12.9	999.9
39.5	107.8	12472.8	183.8	-60.0	99.9	259.7	13.1	999.9
40.0	108.7	12615.4	179.7	-59.3	99.9	255.2	13.8	999.9
40.5	109.6	12759.1	175.6	-58.1	99.9	255.8	14.7	999.9
41.0	110.6	12926.9	171.0	-57.4	99.9	258.5	15.2	999.9
41.5	111.5	13076.2	167.0	-57.5	99.9	258.4	15.2	999.9
42.0	112.3	13216.6	163.3	-57.9	99.9	255.9	14.8	999.9
42.5	113.2	13372.5	159.3	-58.1	99.9	252.2	14.2	999.9
43.0	114.0	13505.4	156.0	-58.1	99.9	247.2	13.5	999.9
43.5	115.0	13669.2	152.0	-57.7	99.9	239.7	13.5	999.9
44.0	115.8	13809.3	148.7	-57.9	99.9	235.0	14.3	999.9
44.5	116.7	13952.3	145.3	-58.5	99.9	234.2	15.2	999.9
45.0	117.5	14075.0	142.5	-58.9	99.9	236.2	16.4	999.9
45.5	118.4	14214.1	139.4	-59.0	99.9	239.6	17.8	999.9
46.0	119.3	14384.5	135.7	-58.7	99.9	242.8	18.3	999.9
46.5	120.2	14540.6	132.3	-58.6	99.9	244.7	17.9	999.9
47.0	121.0	14700.5	129.0	-58.8	99.9	244.6	16.7	999.9
47.5	121.8	14865.3	125.7	-58.8	99.9	242.1	16.4	999.9
48.0	122.7	15000.0	123.0	-58.6	99.9	240.5	17.5	999.9
48.5	123.5	15155.8	120.0	-58.4	99.9	241.3	18.6	999.9
49.0	124.3	15314.6	117.0	-58.2	99.9	244.0	18.9	999.9
49.5	125.2	15459.9	114.3	-58.2	99.9	247.2	18.0	999.9
50.0	126.0	15645.7	111.0	-58.1	99.9	248.2	16.2	999.9
50.5	126.8	15789.3	108.5	-58.6	99.9	244.7	15.1	999.9

51.0	127.6	15919.0	106.3	-58.9	99.9	242.3	15.4	999.9
51.5	128.3	16076.1	103.7	-58.9	99.9	240.8	15.4	999.9
52.0	129.2	16270.0	100.5	-59.1	99.9	238.9	14.2	999.9
52.5	130.0	16427.2	98.0	-60.2	99.9	232.0	12.1	999.9
53.0	130.7	16565.5	95.9	-60.8	99.9	223.5	12.6	999.9
53.5	131.5	16720.5	93.5	-61.0	99.9	219.6	13.4	999.9
54.0	132.3	16888.8	91.0	-61.0	99.9	218.9	14.2	999.9
54.5	133.1	17056.7	88.6	-60.9	99.9	218.4	14.9	999.9
55.0	133.9	17209.0	86.4	-60.9	99.9	216.8	16.6	999.9
55.5	134.6	17365.6	84.3	-60.8	99.9	218.7	18.0	999.9
56.0	135.3	17526.0	82.1	-60.2	99.9	222.3	18.1	999.9
56.5	136.0	17690.4	80.0	-58.9	99.9	228.5	16.7	999.9
57.0	136.7	17861.9	77.9	-58.6	99.9	231.4	14.0	999.9
57.5	137.5	18013.4	76.0	-58.1	99.9	233.7	13.0	999.9
58.0	138.3	18169.6	74.1	-58.2	99.9	236.6	14.0	999.9
58.5	139.0	18352.9	72.0	-59.3	99.9	240.7	16.6	999.9
59.0	139.7	18609.8	69.1	-57.9	99.9	246.4	13.5	999.9
59.5	140.4	18747.8	67.6	-57.2	99.9	247.8	10.2	999.9
60.0	141.0	18806.4	67.0	-56.7	99.9	242.7	6.6	999.9
60.5	141.7	19014.2	64.9	-56.1	99.9	224.5	7.6	999.9
61.0	142.4	19211.6	62.9	-56.3	99.9	214.1	8.2	999.9
61.5	143.0	19402.1	61.0	-56.9	99.9	206.9	8.4	999.9
62.0	143.6	19601.9	59.1	-56.7	99.9	202.6	7.2	999.9
62.5	144.2	19771.2	57.6	-56.7	99.9	198.2	6.4	999.9
63.0	144.8	19894.8	56.4	-57.0	99.9	195.1	6.1	999.9
63.5	145.4	20030.6	55.2	-57.0	99.9	196.6	6.6	999.9
64.0	146.0	20174.5	54.0	-56.9	99.9	200.3	7.7	999.9
64.5	146.6	20375.4	52.3	-57.2	99.9	208.0	7.2	999.9
65.0	147.1	20564.2	50.8	-57.4	99.9	217.9	6.9	999.9
65.5	147.7	20704.8	49.7	-57.2	99.9	234.6	6.7	999.9
66.0	148.2	20878.1	48.3	-57.0	99.9	245.7	6.1	999.9
66.5	148.8	21100.3	46.7	-56.9	99.9	250.4	4.4	999.9
67.0	149.3	21273.8	45.4	-56.8	99.9	226.2	2.6	999.9
67.5	149.8	21414.7	44.4	-56.5	99.9	160.1	3.1	999.9
68.0	150.3	21605.1	43.1	-56.9	99.9	149.4	4.1	999.9
68.5	150.8	21826.4	41.6	-57.7	99.9	153.7	4.1	999.9
69.0	151.3	22012.5	40.4	-57.8	99.9	155.8	2.7	999.9
69.5	151.8	22170.4	39.4	-57.3	99.9	162.6	.4	999.9
70.0	152.3	22333.8	38.4	-56.7	99.9	.3	2.1	999.9
70.5	152.8	22500.9	37.4	-56.0	99.9	5.9	4.9	999.9
71.0	153.3	22664.9	36.5	-55.0	99.9	18.2	5.9	999.9
71.5	153.7	22826.8	35.5	-53.7	99.9	36.9	6.3	999.9
72.0	154.2	23012.6	34.5	-53.1	99.9	48.0	6.9	999.9
72.5	154.5	23234.1	33.4	-53.8	99.9	51.1	7.2	999.9
73.0	154.9	23455.6	32.2	-54.5	99.9	53.9	7.6	999.9
73.5	155.3	23627.2	31.4	-54.5	99.9	48.0	8.3	999.9
74.0	155.7	23786.2	30.6	-54.3	99.9	41.4	9.3	999.9
74.5	156.1	23965.6	29.8	-54.1	99.9	37.5	10.1	999.9
75.0	156.5	24225.9	28.6	-53.8	99.9	40.3	10.4	999.9
75.5	156.8	24486.3	27.5	-53.6	99.9	42.9	10.6	999.9
76.0	157.2	24689.9	26.6	-53.1	99.9	45.3	11.0	999.9
76.5	157.5	24855.6	25.9	-52.5	99.9	47.4	11.4	999.9
77.0	157.9	25021.4	25.3	-51.9	99.9	49.3	11.8	999.9
77.5	158.2	25178.1	24.7	-51.4	99.9	46.7	11.8	999.9
78.0	158.4	25328.8	24.1	-51.1	99.9	41.0	11.5	999.9
78.5	158.7	25479.5	23.6	-50.8	99.9	35.0	11.4	999.9
79.0	159.0	25630.2	23.0	-50.4	99.9	28.9	11.3	999.9
79.5	159.3	25884.2	22.2	-50.0	99.9	29.6	11.4	999.9
80.0	159.6	26138.3	21.3	-49.7	99.9	30.3	11.4	999.9
80.5	159.8	26392.3	20.5	-49.3	99.9	31.0	11.5	999.9

81.0	160.1	26651.9	19.7	-48.9	99.9	30.5	11.7	999.9
81.5	160.4	26919.6	19.0	-48.5	99.9	28.4	12.2	999.9
82.0	160.6	27187.3	18.2	-48.0	99.9	26.5	12.8	999.9
82.5	160.9	27455.0	17.5	-47.6	99.9	24.8	13.3	999.9
83.0	161.1	27688.4	16.8	-46.9	99.9	24.6	13.1	999.9
83.5	161.3	27870.2	16.4	-45.9	99.9	27.0	11.9	999.9
84.0	161.5	28052.0	16.0	-44.9	99.9	29.9	10.7	999.9
84.5	161.7	28233.8	15.5	-44.8	99.9	33.4	9.5	999.9
85.0	162.0	28415.6	15.1	-43.0	99.9	38.0	8.4	999.9
85.5	162.1	28590.0	14.7	-42.7	99.9	999.9	99.9	999.9
86.0	162.3	28762.6	14.4	-42.6	99.9	999.9	99.9	999.9
86.5	162.5	28935.2	14.0	-42.6	99.9	999.9	99.9	999.9
87.0	162.7	29107.8	13.6	-42.5	99.9	999.9	99.9	999.9
87.5	162.9	29280.4	13.3	-42.4	99.9	999.9	99.9	999.9

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1815 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
0.0	6.8	168.0	1002.0	22.6	8.0	330.0	.5	39.0
.5	7.6	246.2	993.0	20.7	7.7	284.4	.6	42.9
1.0	9.0	368.5	979.0	19.2	6.6	280.9	.9	44.0
1.5	10.5	514.3	962.5	17.5	5.7	289.2	.8	46.0
2.0	11.8	630.2	949.5	16.5	4.9	275.0	.3	46.3
2.5	13.0	751.8	936.0	15.4	4.2	198.2	.6	47.0
3.0	14.3	873.5	922.7	14.9	4.7	152.4	.3	50.4
3.5	15.8	1004.4	908.5	14.4	4.3	114.9	.2	50.6
4.0	17.0	1121.3	896.0	13.9	3.9	194.9	2.2	50.9
4.5	18.7	1286.1	878.7	13.7	3.7	155.4	4.4	50.7
5.0	20.0	1418.5	865.0	15.9	2.5	132.8	7.2	40.7
5.5	21.5	1561.9	850.5	15.2	-7.0	134.7	8.2	20.8
6.0	22.8	1681.9	838.5	14.1	-7.5	133.7	7.9	21.6
6.5	24.0	1808.2	826.0	13.1	-7.6	131.3	7.3	22.9
7.0	25.3	1936.1	813.5	12.2	-7.7	128.9	7.9	24.1
7.5	26.5	2065.6	801.0	11.2	-8.0	128.1	8.3	25.2
8.0	27.6	2180.7	790.0	9.9	-8.4	126.6	8.5	26.7
8.5	28.8	2302.2	778.5	9.0	-8.3	125.5	8.7	28.5
9.0	30.0	2425.0	767.0	7.5	-9.0	126.5	8.7	29.7
9.5	31.0	2533.0	757.0	7.3	-8.3	126.5	9.1	31.8
10.0	32.3	2666.9	744.8	5.6	-9.9	127.6	9.2	31.7
10.5	33.4	2785.6	734.0	4.4	-11.1	130.0	8.7	31.5
11.0	34.4	2892.6	724.4	3.5	-12.1	135.5	8.5	30.8
11.5	35.5	3004.1	714.5	3.0	-13.7	143.6	9.1	28.0
12.0	36.8	3141.1	702.5	2.4	-14.6	151.8	10.1	27.2
12.5	38.0	3274.1	691.0	1.4	-16.0	160.6	9.9	25.9
13.0	39.0	3379.5	682.0	.7	-18.8	167.3	8.4	21.4
13.5	40.3	3516.1	670.5	.4	-22.0	166.3	7.1	16.7
14.0	41.4	3644.9	659.8	-.5	-23.2	164.2	5.7	16.0
14.5	42.4	3747.1	651.4	-1.6	-24.1	161.5	4.9	16.0
15.0	43.5	3868.7	641.5	-2.6	-25.0	158.0	4.4	15.9
15.5	44.6	3991.8	631.6	-3.6	-25.9	152.0	4.3	15.8
16.0	45.8	4122.0	621.3	-4.6	-26.7	147.9	4.6	15.8
16.5	46.8	4242.6	611.8	-5.0	-27.0	152.1	5.2	15.9
17.0	47.8	4358.9	602.8	-5.4	-27.4	159.9	5.9	15.8
17.5	49.0	4500.4	592.0	-6.1	-27.5	168.6	6.0	16.4
18.0	50.3	4637.0	581.8	-7.0	-27.8	179.1	5.1	17.0
18.5	51.4	4771.4	571.8	-7.7	-28.2	191.8	4.4	17.5
19.0	52.4	4886.4	563.4	-8.3	-28.5	202.5	4.3	17.6
19.5	53.5	5016.8	554.0	-9.1	-29.2	207.7	4.7	17.7
20.0	54.6	5140.5	545.2	-10.0	-29.9	208.5	5.0	17.7
20.5	55.6	5262.9	536.6	-11.2	-30.5	206.5	4.9	18.4
21.0	56.6	5383.7	528.2	-12.4	-31.0	204.1	4.5	19.3
21.5	57.6	5500.1	520.2	-13.5	-31.7	203.8	4.1	19.6
22.0	58.6	5635.5	511.0	-14.6	-32.8	205.6	3.8	19.4
22.5	59.8	5760.9	502.6	-15.4	-33.5	204.8	3.4	19.4
23.0	60.8	5881.7	494.6	-16.8	-34.7	196.6	3.3	19.4
23.5	61.8	6004.0	486.6	-17.7	-35.4	187.8	3.3	19.5
24.0	63.0	6152.8	477.0	-18.5	-33.9	184.4	2.6	24.0
24.5	64.0	6278.7	469.0	-19.7	-33.2	191.2	1.4	28.7

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1015 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
25.0	65.0	6406.1	461.0	-21.0	-34.5	183.7	1.4	28.3
25.5	66.2	6558.1	451.6	-22.1	-35.8	195.8	1.0	27.4
26.0	67.2	6676.1	444.4	-23.3	-36.6	226.2	.6	28.1
26.5	68.2	6805.3	436.6	-24.6	-37.6	265.1	.5	28.8
27.0	69.2	6926.1	429.4	-26.1	-38.3	294.1	.8	30.3
27.5	70.2	7058.4	421.6	-27.3	-39.5	305.2	1.2	30.3
28.0	71.2	7178.7	414.6	-28.4	-40.1	308.9	1.4	31.1
28.5	72.2	7300.6	407.6	-29.6	-41.0	292.1	1.0	31.7
29.0	73.3	7434.7	400.0	-30.6	-41.8	219.9	1.0	32.2
29.5	74.4	7592.4	391.2	-31.8	-42.7	216.6	1.8	32.6
30.0	75.4	7719.8	384.2	-32.5	-43.6	229.2	2.6	31.8
30.5	76.4	7849.3	377.2	-33.3	-44.3	238.4	3.2	31.7
31.0	77.5	7993.8	369.5	-34.5	-45.3	245.3	3.6	31.8
31.5	78.6	8129.1	362.4	-35.8	-46.5	253.5	3.7	31.9
32.0	79.6	8256.6	355.8	-37.0	-47.6	260.8	3.6	32.0
32.5	80.6	8393.7	348.8	-38.3	-48.6	266.0	3.2	32.3
33.0	81.6	8520.7	342.4	-39.6	99.9	266.2	3.0	999.9
33.5	82.6	8653.6	335.8	-40.7	99.9	261.0	3.2	999.9
34.0	83.6	8784.3	329.4	-41.6	99.9	257.5	3.6	999.9
34.5	84.6	8921.4	322.8	-42.7	99.9	261.1	4.3	999.9
35.0	85.6	9056.2	316.4	-43.9	99.9	267.9	5.2	999.9
35.5	86.5	9171.6	311.0	-44.6	99.9	268.5	6.1	999.9
36.0	87.4	9288.7	305.6	-45.3	99.9	263.5	6.8	999.9
36.5	88.4	9429.7	299.2	-46.4	99.9	256.8	7.4	999.9
37.0	89.4	9577.5	292.6	-47.4	99.9	254.0	7.8	999.9
37.5	90.4	9714.1	286.6	-48.6	99.9	255.2	8.0	999.9
38.0	91.5	9855.2	280.5	-49.8	99.9	259.1	8.2	999.9
38.5	92.5	9984.6	275.0	-50.7	99.9	264.8	8.5	999.9
39.0	93.4	10113.6	269.6	-51.5	99.9	271.6	9.0	999.9
39.5	94.4	10259.4	263.6	-52.5	99.9	279.4	9.5	999.9
40.0	95.4	10397.8	258.0	-53.5	99.9	286.0	9.7	999.9
40.5	96.4	10533.7	252.6	-54.4	99.9	288.6	9.6	999.9
41.0	97.3	10668.3	247.3	-55.3	99.9	286.3	9.4	999.9
41.5	98.2	10786.2	242.8	-55.9	99.9	288.1	9.3	999.9
42.0	99.2	10935.3	237.2	-56.6	99.9	290.4	9.3	999.9
42.5	100.0	11047.3	233.0	-57.4	99.9	291.1	9.6	999.9
43.0	101.0	11212.0	227.0	-57.9	99.9	285.0	9.9	999.9
43.5	101.8	11328.8	222.8	-58.6	99.9	275.2	10.9	999.9
44.0	102.8	11489.7	217.2	-59.2	99.9	269.2	12.3	999.9
44.5	103.8	11641.4	212.0	-59.4	99.9	270.9	13.1	999.9
45.0	104.8	11790.7	207.0	-59.7	99.9	277.4	12.9	999.9
45.5	105.7	11902.4	203.3	-59.8	99.9	281.4	11.7	999.9
46.0	106.6	12037.0	199.0	-60.3	99.9	278.4	10.2	999.9
46.5	107.6	12195.5	194.0	-60.8	99.9	266.1	9.7	999.9
47.0	108.6	12358.0	189.0	-60.5	99.9	254.6	10.7	999.9
47.5	109.6	12504.8	184.6	-59.8	99.9	249.3	11.8	999.9
48.0	110.6	12662.9	180.0	-59.5	99.9	247.3	11.9	999.9
48.5	111.6	12817.6	175.6	-59.6	99.9	246.2	11.9	999.9
49.0	112.5	12965.7	171.5	-59.4	99.9	244.5	12.2	999.9
49.5	113.4	13117.3	167.4	-58.6	99.9	242.5	12.5	999.9

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1815 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
50.0	114.4	13269.6	163.4	-57.7	99.9	240.6	12.5	999.9
50.5	115.4	13426.2	159.4	-57.3	99.9	239.7	12.5	999.9
51.0	116.3	13576.1	155.7	-57.0	99.9	240.0	12.7	999.9
51.5	117.2	13712.9	152.3	-57.4	99.9	241.0	12.9	999.9
52.0	118.0	13852.4	149.0	-57.6	99.9	241.6	12.7	999.9
52.5	118.8	13995.6	145.7	-57.4	99.9	239.0	12.8	999.9
53.0	119.8	14165.6	141.8	-57.7	99.9	234.8	13.3	999.9
53.5	120.7	14322.0	138.3	-57.7	99.9	230.8	14.3	999.9
54.0	121.6	14494.6	134.6	-58.0	99.9	226.9	15.2	999.9
54.5	122.6	14684.6	130.6	-58.2	99.9	229.6	15.6	999.9
55.0	123.5	14835.4	127.5	-58.8	99.9	231.9	15.4	999.9
55.5	124.3	14976.8	124.7	-58.9	99.9	233.8	14.6	999.9
56.0	125.1	15134.3	121.6	-58.1	99.9	233.8	13.6	999.9
56.5	125.9	15246.5	119.4	-57.5	99.9	230.4	13.8	999.9
57.0	126.7	15413.0	116.3	-57.4	99.9	226.1	15.6	999.9
57.5	127.6	15585.4	113.2	-57.0	99.9	228.3	16.5	999.9
58.0	128.4	15726.2	110.7	-56.5	99.9	230.4	16.1	999.9
58.5	129.2	15[illegible]4.2	108.3	-56.2	99.9	232.7	15.5	999.9
59.0	130.0	160[illegible].0	105.0	-56.7	99.9	234.0	14.7	999.9
59.5	130.8	16215.2	102.5	-56.7	99.9	232.0	12.8	999.9
60.0	131.7	16371.8	100.0	-57.2	99.9	226.6	11.6	999.9
60.5	132.4	16518.0	97.7	-57.7	99.9	221.5	11.6	999.9
61.0	133.2	16662.1	95.5	-58.4	99.9	218.8	12.3	999.9
61.5	134.0	16828.1	93.0	-59.8	99.9	220.4	13.8	999.9
62.0	134.7	16974.1	90.9	-60.6	99.9	223.8	15.5	999.9
62.5	135.5	17137.9	88.5	-60.9	99.9	227.7	15.9	999.9
63.0	136.3	17305.8	86.1	-60.7	99.9	232.1	14.8	999.9
63.5	137.0	17461.9	84.0	-60.2	99.9	237.3	12.6	999.9
64.0	137.7	17624.3	81.9	-59.7	99.9	237.3	12.2	999.9
64.5	138.5	17807.2	79.5	-59.6	99.9	239.5	11.7	999.9
65.0	139.3	17986.7	77.3	-59.4	99.9	244.2	10.5	999.9
65.5	139.9	18140.5	75.4	-58.4	99.9	251.9	8.7	999.9
66.0	140.6	18318.1	73.3	-58.1	99.9	251.0	6.2	999.9
66.5	141.3	18479.3	71.4	-57.5	99.9	237.9	4.3	999.9
67.0	142.0	18606.6	70.0	-56.1	99.9	212.6	4.3	999.9
67.5	142.6	18780.6	68.1	-56.2	99.9	208.0	6.1	999.9
68.0	143.3	18957.8	66.3	-56.3	99.9	206.5	7.7	999.9
68.5	143.9	19139.6	64.4	-56.4	99.9	206.6	9.1	999.9
69.0	144.6	19291.1	62.9	-56.6	99.9	208.4	9.5	999.9
69.5	145.2	19447.1	61.3	-57.0	99.9	209.5	8.9	999.9
70.0	145.8	19621.4	59.7	-57.5	99.9	208.5	7.1	999.9
70.5	146.4	19772.9	58.2	-57.4	99.9	210.1	6.4	999.9
71.0	147.0	19909.1	57.0	-56.9	99.9	213.7	6.5	999.9
71.5	147.6	20123.3	55.1	-56.8	99.9	224.6	5.4	999.9
72.0	148.2	20304.9	53.6	-56.8	99.9	234.9	4.2	999.9
72.5	148.8	20437.7	52.4	-56.9	99.9	242.4	2.7	999.9
73.0	149.3	20603.7	51.1	-57.0	99.9	225.5	1.9	999.9
73.5	149.8	20791.7	49.6	-57.3	99.9	189.9	2.3	999.9
74.0	150.3	20946.2	48.4	-56.9	99.9	155.2	2.2	999.9
74.5	150.8	21078.4	47.4	-56.1	99.9	108.1	2.6	999.9

STATION NO. 2
WHEELER RIDGE, CALIF

14 APRIL 1981
1815 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
75.0	151.3	21214.3	46.4	-55.8	99.9	102.3	2.4	999.9
75.5	151.8	21352.6	45.4	-56.0	99.9	126.5	1.3	999.9
76.0	152.3	21539.7	44.1	-56.8	99.9	164.6	.7	999.9
76.5	152.8	21759.2	42.6	-55.8	99.9	249.7	.5	999.9
77.0	153.3	21975.5	41.2	-56.0	99.9	106.6	1.4	999.9
77.5	153.7	22189.6	39.8	-56.3	99.9	102.4	4.9	999.9
78.0	154.2	22379.0	38.6	-56.2	99.9	96.5	7.5	999.9
78.5	154.6	22531.4	37.7	-55.4	99.9	85.7	8.7	999.9
79.0	155.1	22707.6	36.7	-54.7	99.9	76.1	9.3	999.9
79.5	155.6	22878.4	35.2	-54.4	99.9	54.0	7.0	999.9
80.0	156.1	23227.5	33.8	-54.1	99.9	30.5	6.5	999.9
80.5	156.5	23389.8	33.0	-53.9	99.9	41.9	7.1	999.9
81.0	156.9	23552.0	32.2	-53.7	99.9	51.1	8.1	999.9
81.5	157.3	23697.8	31.5	-52.9	99.9	50.5	8.3	999.9
82.0	157.6	23835.1	30.8	-51.9	99.9	47.9	8.5	999.9
82.5	157.9	23974.3	30.1	-50.9	99.9	45.3	8.6	999.9
83.0	158.3	24106.1	29.2	-50.1	99.9	46.7	8.9	999.9
83.5	158.6	24416.1	28.2	-49.4	99.9	48.9	9.3	999.9
84.0	158.9	24646.1	27.2	-48.6	99.9	51.0	9.7	999.9
84.5	159.3	24827.3	26.5	-48.4	99.9	52.7	10.6	999.9
85.0	159.6	24996.2	25.8	-48.2	99.9	54.0	11.7	999.9
85.5	159.9	25165.2	25.1	-48.1	99.9	55.1	12.8	999.9
86.0	160.2	25397.7	24.3	-47.8	99.9	52.7	12.2	999.9
86.5	160.5	25646.1	23.4	-47.6	99.9	48.8	11.3	999.9
87.0	160.8	25894.5	22.5	-47.3	99.9	44.3	10.4	999.9
87.5	161.1	26106.2	21.8	-47.5	99.9	40.2	9.8	999.9
88.0	161.4	26262.8	21.3	-48.3	99.9	37.6	9.5	999.9
88.5	161.6	26419.4	20.8	-49.1	99.9	34.9	9.3	999.9
89.0	161.9	26576.0	20.3	-49.9	99.9	32.0	9.0	999.9
89.5	162.1	26763.1	19.7	-50.0	99.9	[illegible]	8.7	999.9
90.0	162.3	26996.0	19.1	-49.0	99.9	19.5	8.4	999.9
90.5	162.5	27229.0	18.4	-48.0	99.9	11.2	8.3	999.9
91.0	162.7	27461.9	17.8	-47.0	99.9	2.8	8.3	999.9
91.5	163.0	27694.8	17.1	-45.9	99.9	354.6	8.5	999.9
92.0	163.1	27921.3	16.6	-45.2	99.9	349.6	8.7	999.9
92.5	163.3	28146.3	16.1	-44.5	99.9	345.5	9.0	999.9
93.0	163.5	28371.2	15.6	-43.8	99.9	341.7	9.3	999.9
93.5	163.7	28596.1	15.0	-43.2	99.9	338.1	9.6	999.9
94.0	163.8	28821.0	14.5	-42.5	99.9	334.8	10.0	999.9
94.5	164.0	29045.9	14.0	-41.8	99.9	331.8	10.4	999.9
95.0	164.2	29286.3	13.5	-40.5	99.9	999.9	99.9	999.9
95.5	164.5	29526.6	13.1	-39.2	99.9	999.9	99.9	999.9
96.0	164.7	29766.9	12.6	-37.9	99.9	999.9	99.9	999.9
96.5	164.9	30007.3	12.2	-36.6	99.9	999.9	99.9	999.9

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1818 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
0.0	20.0	1366.0	867.8	21.0	2.3	150.0	6.2	29.0
.5	21.7	1540.6	850.3	17.4	-4.7	113.8	6.6	21.7
1.0	24.0	1775.9	827.0	13.3	-8.0	106.6	6.3	21.9
1.5	25.7	1936.3	811.3	11.8	-7.6	112.9	6.9	24.9
2.0	27.4	2112.1	794.4	10.1	-7.5	119.7	8.0	28.0
2.5	29.0	2274.3	779.0	8.9	-8.1	117.9	9.1	28.9
3.0	30.7	2456.5	762.0	7.3	-8.6	117.1	10.4	31.3
3.5	32.3	2630.5	746.0	5.4	-8.7	117.4	11.2	35.3
4.0	34.0	2807.1	730.0	3.9	-9.2	114.0	11.9	37.9
4.5	35.7	2982.9	714 3	2.0	-9.5	112.3	11.1	42.0
5.0	37.0	3111.6	703.0	.7	-10.8	112.1	10.8	41.5
5.5	38.5	3273.1	689.0	-.1	-18.0	124.0	9.4	25.3
6.0	39.8	3401.7	678.0	-.4	-20.8	141.8	8.6	19.5
6.5	41.3	3580.2	663.0	-1.6	-21.2	149.2	9.5	20.8
7.0	43.0	3749.8	649.0	-2.0	-23.9	153.0	9.6	16.7
7.5	44.3	3898.0	637.0	-3.0	-24.2	158.3	9.2	17.5
8.0	45.8	4057.7	624.3	-4.3	-25.3	163.0	8.9	17.5
8.5	47.3	4234.8	610.3	-5.6	-27.2	170.4	7.7	16.3
9.0	48.8	4391.4	598.3	-6.4	-27.9	177.3	6.3	16.2
9.5	50.5	4586.2	583.5	-7.3	-28.4	186.9	4.6	16.5
10.0	51.8	4727.3	573.0	-8.5	-29.1	199.9	3.4	17.0
10.5	53.3	4904.7	560.0	-10.1	-30.5	206.6	3.0	17.0
11.0	54.5	5043.3	550.0	-11.3	-31.5	204.6	3.3	16.9
11.5	56.0	5226.2	537.0	-12.5	-32.7	199.3	3.9	16.6
12.0	57.3	5369.7	527.0	-13.3	-32.5	206.8	3.9	18.0
12.5	58.5	5515.2	517.0	-14.6	-33.3	212.3	4.0	18.4
13.0	59.8	5662.8	507.0	-15.9	-34.1	218.9	4.0	18.9
13.5	61.0	5812.4	497.0	-17.4	-35.0	220.8	3.9	19.8
14.0	62.3	5964.7	487.0	-18.1	-35.8	209.4	3.3	19.4
14.5	63.5	6111.6	477.5	-19.1	-36.4	197.9	2.8	19.9
15.0	64 8	6260.8	468.0	-20.6	-35.7	191.2	2.0	24.5
15.5	66.0	6420.1	458.0	-21.6	-34.4	200.1	.8	30.0
16.0	67.3	6561.9	449.3	-23.2	-35.1	318.8	.2	32.5
16.5	68.5	6714.0	440.0	-24.6	-35.5	347.0	.5	35.1
17.0	69.8	6868.2	430.8	-26.0	-36.6	327.7	.6	36.0
17.5	71.0	7033.3	421.0	-27.5	-38.0	302.6	1.0	35.9
18.0	72.3	7184.3	412.3	-28.5	-38.9	301.5	1.6	35.7
18.5	73.4	7325.4	404.2	-29.7	-40.0	290.6	1.8	35.6
19.0	74.5	7462.2	396.5	-30.9	-41.1	262.0	1.7	35.4
19.5	76.0	7651.8	386.0	-32.7	-42.8	235.9	2.2	35.1
20.0	77.3	7813.1	377.3	-34.0	-43.9	239.5	2.6	35.6
20.5	78.4	7963 8	369.2	-35.5	-45.3	241.4	3.0	35.5
21.0	79.4	8096.8	362.2	-36.6	-46.3	244.0	3.5	35.4
21.5	80.5	8235.5	355.0	-37.7	-47.3	247.2	3.8	35.4
22.0	81.8	8397.2	346.8	-39.3	-48.8	251 3	3.9	35.3
22.5	83.3	8586.9	337.3	-40.7	99.9	256.8	3.7	999.9
23.0	84.5	8765.3	328.5	-42.4	99.9	265.6	3.7	999.9
23.5	85.6	8912.5	321.4	-43.6	99.9	262.7	4.0	999.9
24.0	86.8	9058 0	314.5	-44.9	99.9	255.2	4.5	999.9
24.5	88.0	9218.7	307.0	-46.3	99.9	253.5	5.4	999.9

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1810 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
25.0	89.3	9405.2	298.5	-47.2	99.9	264.6	6.5	999.9
25.5	90.5	9573.3	291.0	-48.2	99.9	272.2	7.9	999.9
26.0	91.6	9724.1	284.4	-49.3	99.9	273.9	9.2	999.9
26.5	92.6	9863.6	278.4	-50.3	99.9	272.2	10.2	999.9
27.0	94.0	10062.7	270.0	-51.6	99.9	270.4	11.1	999.9
27.5	95.3	10238.9	262.8	-53.1	99.9	274.2	11.7	999.9
28.0	96.4	10391.4	256.6	-54.1	99.9	279.8	11.8	999.9
28.5	97.4	10532.6	251.0	-55.0	99.9	285.5	11.8	999.9
29.0	98.5	10687.0	245.0	-55.9	99.9	288.2	11.9	999.9
29.5	99.8	10864.2	238.3	-56.9	99.9	286.7	12.0	999.9
30.0	101.3	11073.6	230.5	-57.3	99.9	283.3	11.4	999.9
30.5	102.5	11268.2	223.5	-58.1	99.9	279.4	9.9	999.9
31.0	103.8	11446.7	217.3	-58.3	99.9	274.7	8.8	999.9
31.5	105.0	11630.0	211.0	-58.4	99.9	271.5	8.5	999.9
32.0	106.0	11780.8	206.0	-58.6	99.9	270.1	9.0	999.9
32.5	107.3	11943.4	200.8	-58.6	99.9	267.8	10.0	999.9
33.0	108.5	12142.2	194.5	-58.8	99.9	266.4	12.0	999.9
33.5	109.6	12322.3	189.0	-58.9	99.9	265.2	14.7	999.9
34.0	110.6	12470.0	184.6	-58.9	99.9	264.6	17.0	999.9
34.5	111.6	12628.6	180.0	-58.9	99.9	263.6	17.4	999.9
35.0	112.6	12783.6	175.6	-59.0	99.9	259.5	16.4	999.9
35.5	113.6	12950.4	171.0	-59.1	99.9	252.7	15.1	999.9
36.0	114.6	13113.7	166.6	-58.7	99.9	247.6	14.4	999.9
36.5	115.6	13266.6	162.6	-58.2	99.9	245.1	14.0	999.9
37.0	116.6	13423.5	158.6	-58.0	99.9	242.6	13.9	999.9
37.5	117.6	13584.4	154.6	-58.3	99.9	239.5	14.1	999.9
38.0	118.6	13749.4	150.6	-58.3	99.9	236.9	14.9	999.9
38.5	119.6	13919.0	146.6	-58.1	99.9	236.1	16.1	999.9
39.0	120.6	14093.2	142.6	-58.3	99.9	236.2	16.9	999.9
39.5	121.6	14272.1	138.6	-58.8	99.9	235.5	16.9	999.9
40.0	122.6	14427.6	135.2	-59.2	99.9	233.6	16.9	999.9
40.5	123.5	14578.0	132.0	-59.4	99.9	232.1	17.5	999.9
41.0	124.3	14738.2	128.7	-59.2	99.9	231.2	18.1	999.9
41.5	125.2	14894.1	125.5	-58.7	99.9	230.8	18.4	999.9
42.0	126.0	15020.3	123.0	-58.4	99.9	231.9	18.7	999.9
42.5	126.8	15194.3	119.7	-57.0	99.9	234.5	17.7	999.9
43.0	127.7	15336.9	117.0	-57.1	99.9	234.5	16.3	999.9
43.5	128.5	15501.6	114.0	-57.5	99.9	231.5	15.7	999.9
44.0	129.4	15681.0	110.8	-57.6	99.9	227.3	16.2	999.9
44.5	130.3	15834.3	108.1	-57.4	99.9	225.6	17.6	999.9
45.0	131.0	15960.3	106.0	-57.4	99.9	226.3	19.0	999.9
45.5	131.8	16111.5	103.5	-57.4	99.9	228.8	19.9	999.9
46.0	132.7	16308.3	100.3	-57.9	99.9	229.8	19.8	999.9
46.5	133.6	16507.7	97.2	-58.7	99.9	228.9	18.7	999.9
47.0	134.5	16684.2	94.5	-59.9	99.9	225.5	17.3	999.9
47.5	135.3	16851.3	92.0	-60.7	99.9	221.1	16.6	999.9
48.0	136.1	17017.6	89.6	-60.6	99.9	217.9	17.1	999.9
48.5	136.9	17168.7	87.4	-59.5	99.9	218.3	19.2	999.9
49.0	137.7	17345.2	85.0	-59.7	99.9	221.5	20.4	999.9
49.5	138.6	17554.9	82.2	-59.6	99.9	225.8	18.8	999.9

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1810 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
50.0	139.4	17713.2	80.1	-58.8	99.9	229.9	14.8	999.9
50.5	140.1	17833.3	78.6	-58.3	99.9	233.8	11.3	999.9
51.0	140.8	17985.6	76.8	-58.4	99.9	233.6	11.4	999.9
51.5	141.4	18154.9	74.7	-58.7	99.9	238.5	12.6	999.9
52.0	142.1	18337.8	72.6	-59.8	99.9	244.8	14.0	999.9
52.5	142.9	18525.2	70.4	-58.7	99.9	249.4	12.9	999.9
53.0	143.6	18667.0	68.9	-58.4	99.9	241.9	11.1	999.9
53.5	144.3	18826.5	67.1	-58.8	99.9	228.6	9.8	999.9
54.0	145.0	19029.9	65.0	-57.2	99.9	215.2	9.6	999.9
54.5	145.7	19171.2	63.6	-57.0	99.9	212.7	9.8	999.9
55.0	146.4	19343.4	61.9	-57.1	99.9	210.5	9.7	999.9
55.5	147.0	19536.4	60.0	-57.4	99.9	208.3	9.5	999.9
56.0	147.6	19678.3	58.8	-57.4	99.9	212.1	8.9	999.9
56.5	148.3	19834.5	57.3	-57.5	99.9	216.3	8.4	999.9
57.0	148.9	20044.1	55.4	-57.7	99.9	221.1	7.9	999.9
57.5	149.5	20202.8	54.0	-57.9	99.9	223.4	7.8	999.9
58.0	150.1	20365.4	52.6	-58.2	99.9	225.6	7.8	999.9
58.5	150.8	20594.4	50.7	-58.6	99.9	229.5	7.7	999.9
59.0	151.3	20771.6	49.3	-58.6	99.9	229.3	5.8	999.9
59.5	151.9	20914.1	48.2	-58.5	99.9	221.6	2.8	999.9
60.0	152.4	21058.2	47.2	-57.6	99.9	208.2	2.6	999.9
60.5	152.9	21184.7	46.2	-56.6	99.9	199.6	3.1	999.9
61.0	153.5	21425.4	44.5	-56.7	99.9	195.1	3.5	999.9
61.5	154.1	21669.5	42.8	-56.8	99.9	188.5	3.5	999.9
62.0	154.6	21828.8	41.8	-56.2	99.9	153.0	2.3	999.9
62.5	155.1	21978.7	40.8	-55.8	99.9	104.8	2.3	999.9
63.0	155.5	22115.2	39.9	-56.1	99.9	55.1	2.1	999.9
63.5	156.0	22259.8	39.0	-56.4	99.9	23.1	3.3	999.9
64.0	156.5	22491.8	37.6	-55.5	99.9	50.9	4.8	999.9
64.5	156.9	22723.8	36.3	-54.6	99.9	63.6	7.8	999.9
65.0	157.4	22903.5	35.3	-54.3	99.9	76.0	6.6	999.9
65.5	157.8	23078.1	34.4	-54.2	99.9	92.6	6.8	999.9
66.0	158.3	23298.6	33.2	-53.9	99.9	86.7	5.9	999.9
66.5	158.7	23568.5	31.8	-53.6	99.9	66.5	6.6	999.9
67.0	159.1	23788.1	30.7	-52.8	99.9	58.4	7.7	999.9
67.5	159.5	23932.5	30.1	-51.6	99.9	61.6	8.6	999.9
68.0	159.8	24076.9	29.4	-50.3	99.9	64.2	9.5	999.9
68.5	160.1	24865.8	28.6	-49.4	99.9	64.8	10.2	999.9
69.0	160.5	24521.6	27.5	-49.2	99.9	63.1	10.5	999.9
69.5	160.9	24777.4	26.4	-49.8	99.9	61.5	10.8	999.9
70.0	161.2	24985.8	25.6	-48.9	99.9	60.2	11.9	999.9
70.5	161.5	25164.3	24.9	-48.8	99.9	59.2	13.6	999.9
71.0	161.9	25335.7	24.3	-48.7	99.9	58.4	15.3	999.9
71.5	162.2	25506.9	23.6	-48.6	99.9	57.1	15.1	999.9
72.0	162.5	25678.4	23.1	-48.4	99.9	55.2	13.5	999.9
72.5	162.8	25843.9	22.5	-48.3	99.9	52.7	11.9	999.9
73.0	163.1	26029.5	21.8	-48.2	99.9	49.7	10.7	999.9
73.5	163.3	26203.6	21.1	-48.2	99.9	47.1	11.2	999.9
74.0	163.6	26537.7	20.3	-48.3	99.9	44.8	11.8	999.9
74.5	163.8	26791.9	19.5	-48.3	99.9	42.7	12.3	999.9

STATION NO. 4
TEHACHAPI, CALIF

14 APRIL 1981
1818 GMT

TIME MIN	CNTCT	HEIGHT GPM	PRES MB	TEMP DG C	DEW PT DG C	DIR DG	SPEED M/SEC	R HUM PCT
75.0	164.1	27011.2	18.8	-48.2	99.9	40.1	12.3	999.9
75.5	164.3	27178.5	18.4	-47.7	99.9	36.1	11.6	999.9
76.0	164.5	27345.7	17.9	-47.2	99.9	31.6	10.8	999.9
76.5	164.8	27512.9	17.5	-46.8	99.9	26.4	10.2	999.9
77.0	165.0	27680.1	17.0	-46.3	99.9	20.7	9.7	999.9
77.5	165.2	27930.7	16.4	-45.4	99.9	999.9	99.9	999.9
78.0	165.4	28181.4	15.8	-44.5	99.9	999.9	99.9	999.9
78.5	165.6	28432.0	15.3	-43.6	99.9	999.9	99.9	999.9
79.0	165.8	28682.7	14.7	-42.7	99.9	999.9	99.9	999.9
79.5	166.0	28933.3	14.1	-41.8	99.9	999.9	99.9	999.9

APPROVAL

ATMOSPHERIC OBSERVATIONS FOR STS-1 LANDING

By Robert E. Turner, James E. Arnold, and Gregory S. Wilson

The information in this report has been reviewed for technical content. Review of any information concerning Department of Defense or nuclear energy activities or programs has been made by the MSFC Security Classification Officer. This report, in its entirety, has been determined to be unclassified.

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